EXHIBIT 6

CONDITION ASSESSMENT

514 W. 54th St.

Sand Springs, OK 74063

For:

Mike McGrew
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Ramseyer and Associates PLLC

March 9th, 2018

Assessment By:

Chris Ramseyer, Ph.D., P.E.

Chris Ramseyer, Ph.D., P.E. with Ramseyer and Associates PLLC performed a limited scope, visual only, onsite inspection and assessment of **514** W. 54th St. Sand Springs, OK 74063. Please see Figure A. The initial inspection visit was on February 24th, 2018. My credentials are provided in Appendix A. Additionally I have experience installing residential shingles commercially. I nailed off my first roof at 15 years of age.

General Construction of the Structure

Figure A provides an aerial view of the structure currently. The construction of the residence is standard wood stud wall construction with brick veneer on the front of the house and brick wainscoting on the other three sides with siding above the brick. The laminated roof shingles are stamped TAMKO – JOPLIN 10602C The roof is original to the residence and approximately ten years of age. The roof was gauged (Haar, 2016) as a 30 year shingle and is consistent with my observation. The roof is laid on one layer of felt.

Figure A – Aerial view of 514 54th St, Sand Springs, OK 74063

Files Reviewed

- Deposition of Ryan Scott Smith dated February 6, 2018
- Photo Sheet from CSAA Insurance Group dated 12/11/2016 by Shane Haar
- Photo Sheet from US Adjusting Services dated 5/152017 by Mickey Manzer

Event

On Thursday, July 14, 2016 a high wind event was experienced at the location of this residence. The estimated wind speed at this location was 66 mph. A review of the claim photos taken by Shane Haar on 12/11/2016 show that the wind event caused:

- The metal skirt of one of the roof flashing was pushed up by the wind causing the office water damage
- Member stated water was leaking out of the crown molding. Point of entry is from the roof where the exhaust skirt was blown up by the winds. No water stains could be observed
- Small hail marks to the shutter paint
- Hail damage to downspouts
- Hail damage to window screen
- Member stated the wind pulled away the gutter (from the house)
- Member stated the wind blew off this gate

A review of the deposition of Ryan Scott Smith dated February 6, 2018. Discussing how he became involved in the Goins roof claim:

- Well, we ended up doing -- between the two companies, I ended up doing, like, 17 houses in that neighborhood and 13 in a 2-block span. And Mr. Goins called me, I believe, in early May – I want to say early May, late April.
- It's (the Goins) the second worst roof I've been on in this neighborhood.
- **Q** Primarily, they (the 17 houses inspected) were damaged by wind because the shingles had been unsealed, correct? **A** Unsealed and, in most cases, actually, the -- even further, they had been pulled from many of the nails. They had ripped through the nails.

Scope of Work

The specific tasks that were performed in this condition assessment are:

1. Conduct a visual survey, physical survey and photographic documentation of the condition of the roof shingles on this residence. The photographic documentation is provided in Appendix B.
2. Review the history of the event
3. Based on the condition assessment in #1 and the known history of the property in #2 present an unbiased evaluation of the roof.

4. Based on items #1 - #3 provide an independent opinion

My fee is $185 per hour for standard engineering work and $300 per hour for depositions and time in court.

Visual Survey and Photographic Documentation:
Appendix B summarizes the conditions and issues were observed during the preliminary assessment of the exteriors of the buildings. To summarize the attached photos:

Figure 1 – Front (North face) of 514 W. 54th st, Sand Springs, OK
Figure 2 – From the NE, looking to SW
Figure 3 – Back of house
Figure 4 – Loose shingles on North slope of roof seen in Figure 1
Figure 5 – Close up of nail from Figure 4 illustrating shingle pull over.
Figure 6 – Close up of glue strip
Figure 7 – close up of glue strip
Figure 8 – Shingle damage
Figure 9 – Portions of lower shingle adhering to the bottom of the top shingle
Figure 10 – Portions of lower shingle adhering to the bottom of the top shingle
Figure 11 – Damaged roof ridge shingle
Figure 12 – Damaged shingle of west facing roof slope
Figure 13 – Damaged shingle of west facing roof slope
Figure 14 – Damaged shingle
Figure 15 – View to the SW
Figure 16 – Roof nails as seen from the attic.
Figure 17 – Damaged Shingle
Figure 18 – Close up of nail illustrating shingle pull over.
Figure 19 – Relationship of glue strip to nail - shingle pull through
Figure 20 – Relationship of glue strip to nail - shingle pull through with lower shingle damage at glue strip

Figure B shows the result of a survey of the density or occurrence of failed glue strips in a given area. Often the left edge of one shingle that became unsealed would interact with the shingle above it and the combined force would unseal the upper shingle. This type of interaction failure is illustrated in Figure C. Table 1 presents the number of courses in a series of these interactions by location.

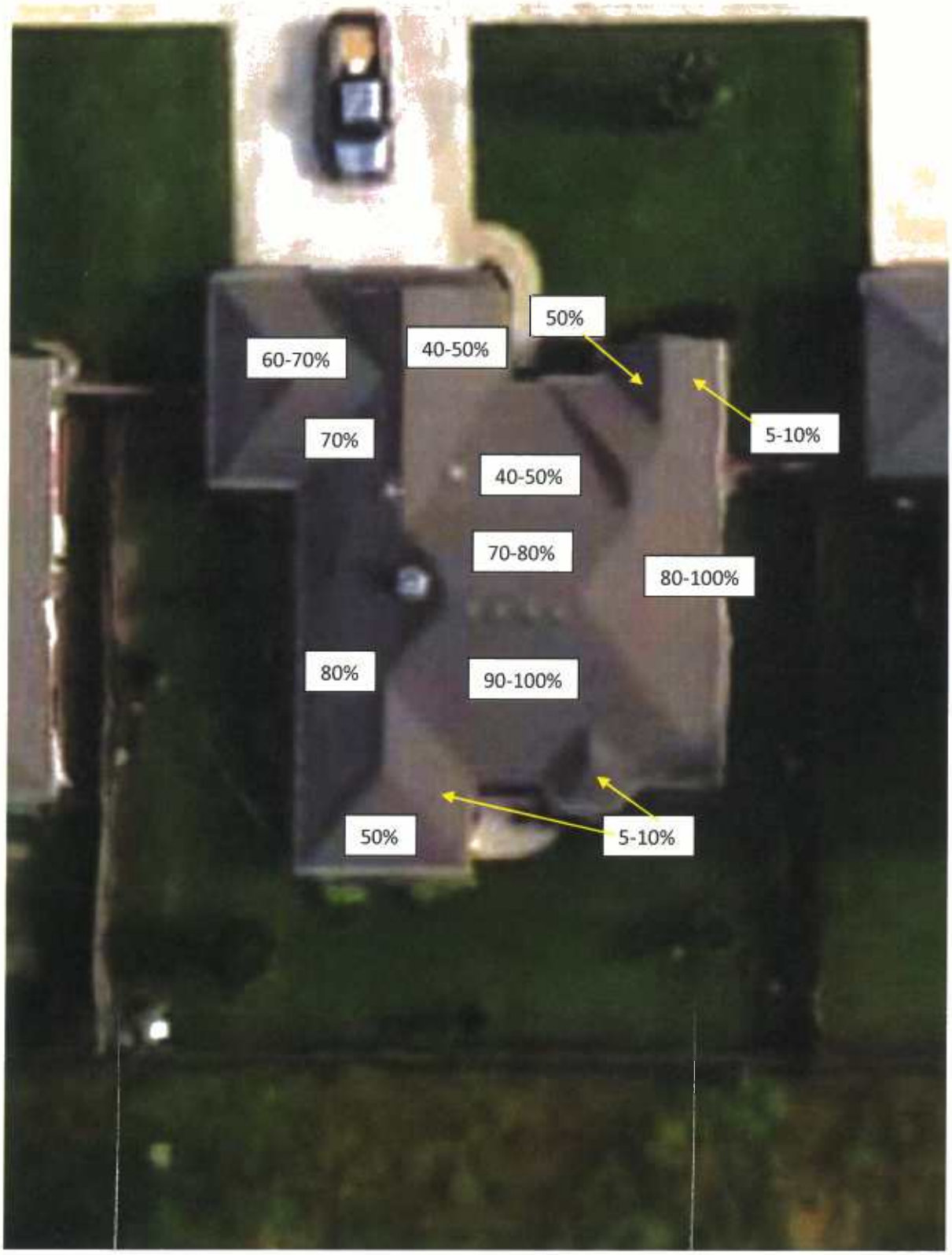


Figure B – survey of failed glue strips as percentage of area

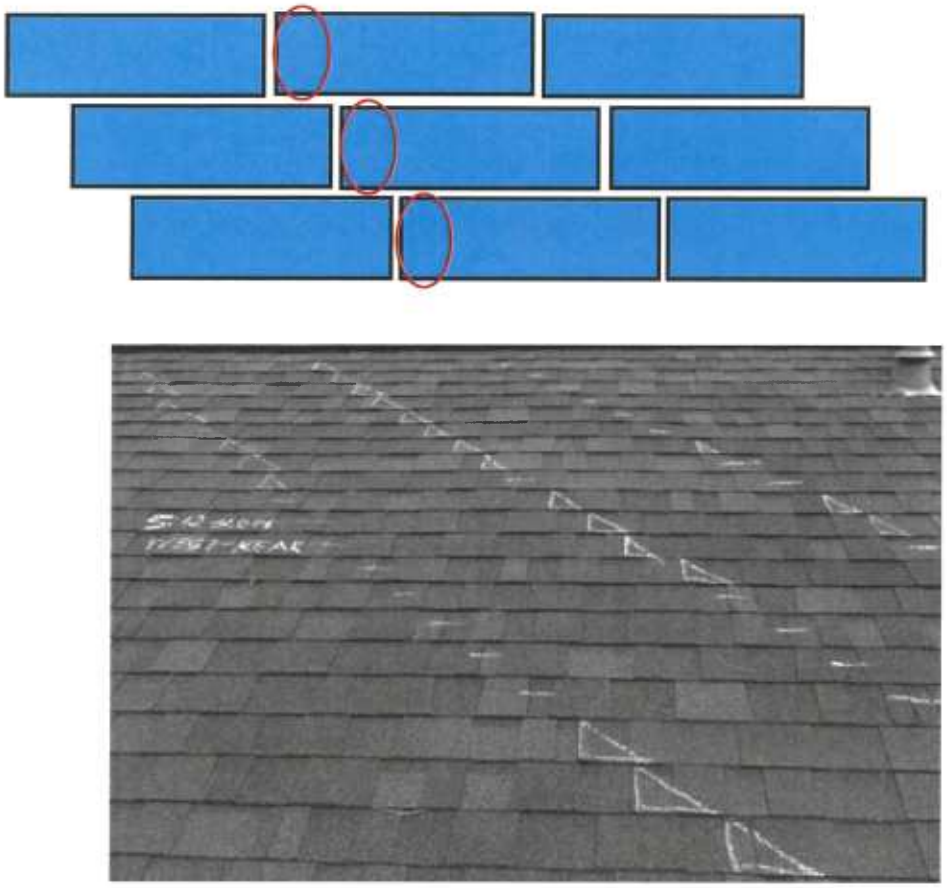


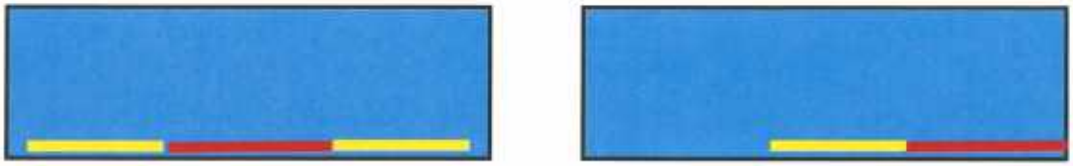
Figure C – left edge interaction sealing failures a) representation of plan view b) Laminate shingle roof located in Houston, TX with partially unsealed shingles located by triangular chalk marks and fully sealed shingles located by dash marks (Dixon, 2013)

Table 1 – Density of left edge interaction sealing failures

Location	Number of courses failed	Number of courses checked	%
East slope over Garage	11	12	92
West slope of west roof	28	33	85
	27	28	96
	28	30	93
South slope primary roof	31	36	86
	24	27	89
	21	27	78
East slope of east roof	19	20	95

The reason a left edge interaction sealing failure occurs can be explained by structural mechanics. Figure D illustrates a single shingle exposed to a discreet uplift force in the region in red. This is a high stress condition and as the shingle deforms due to this load it starts to stress

the glue strip directly adjacent to it shown in orange. In condition a) the high stress region is supported on each side by a region that shares some of the load while in condition b) it is supported only on one side. The result is that given a uniform load over the shingle, the glue strip will fail similar to b), at each end of the shingle first.



a) **b)**

Figure D – Initiation of sealing failure a) from the center of shingle and b) from edge of shingle. The glue strip in red is highly stressed the glue strip in orange has a lower stress

Now let's consider several rows or courses of shingles. Figure E illustrates a roofing system in which the courses are laid in a pattern with the joints lining up with the midline of the shingle above. In this case the failure of the glue strip in red and the subsequent bending of the shingle along the black line adds a deformation load to the suction load of the shingle above it shown in orange. The bending along the black line is illustrated in Figure F. The stress on this glue strip is not uniform. Because the bending line angles as shown, the extreme upper right edge of the shingle deforms or bends more, applying more force in this region. This is the reason the orange strip extend slightly to the right of the mid-point of the lower shingles. Given the probabilistic nature of system it would be doubtful that one outcome exceeds the other as far as origination of failure in the upper shingle.

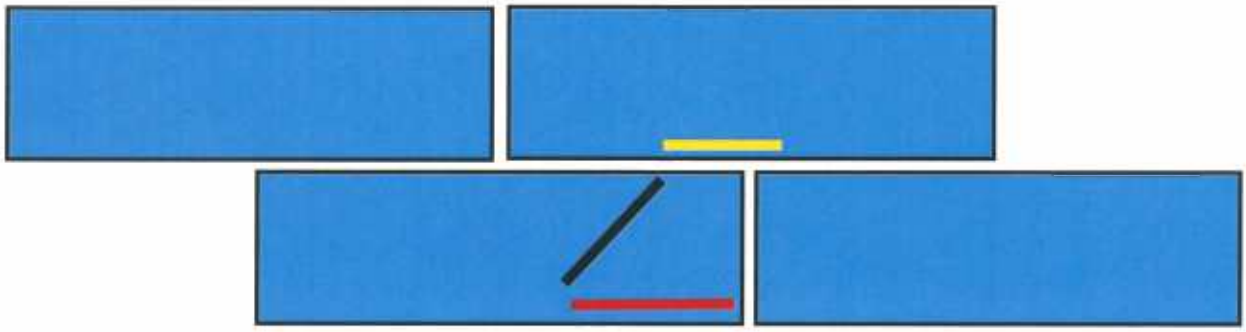


Figure E – Initiation of sealing failure at red line

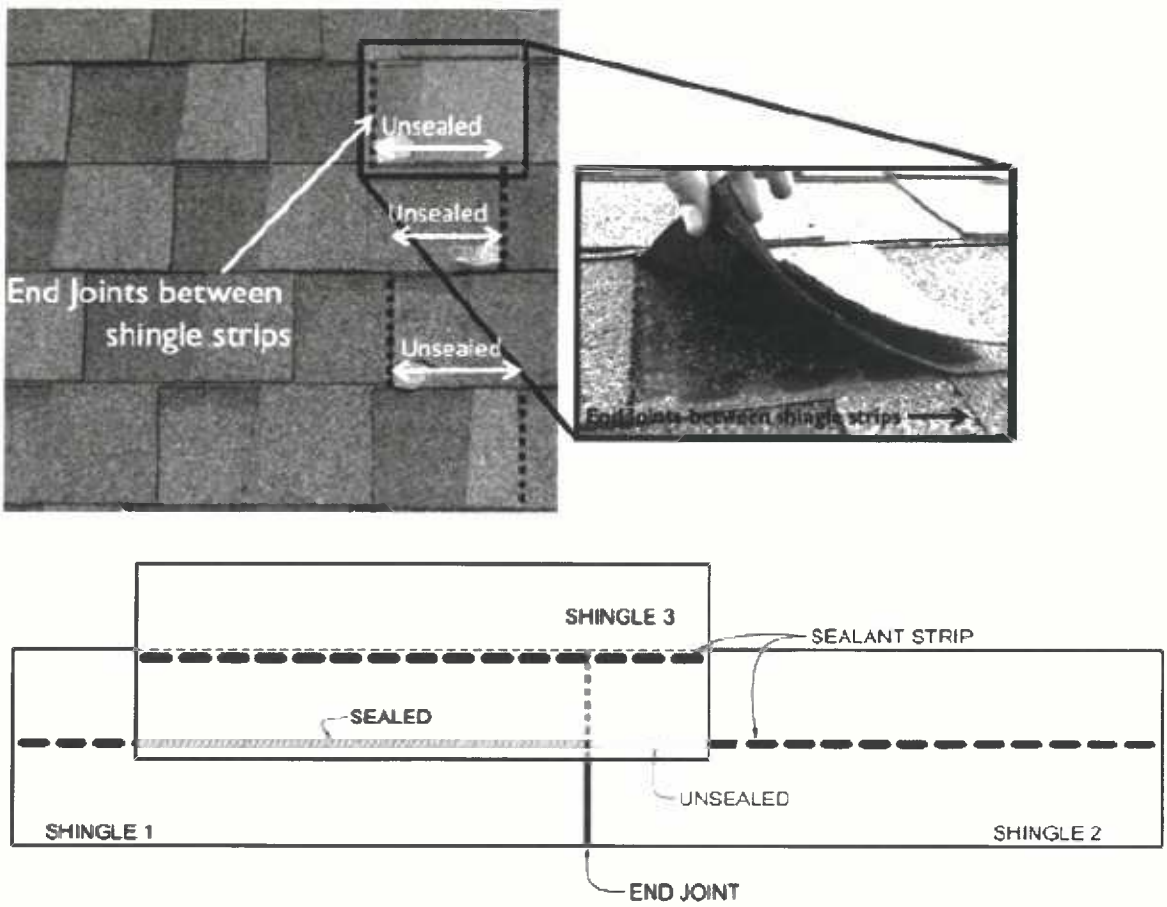


Figure F – Location of partial unsealing with laminate shingle systems (Dixon, 2013)

Now let's consider several rows or courses of shingles with a typical roofing shingle overlap. Figure G and H illustrate a roofing system in which the courses are laid in a pattern with the joints offset by a small amount. In this case the failure of the glue strip in red and the subsequent bending of the shingle along the black line adds a deformation load to the suction load of the shingle above it shown in orange, very similar to the last case. The stress on this glue strip is not uniform. Because the bending line angles as shown, the extreme upper right edge of the shingle deforms or bends more, applying more force in this region. In Figure G the glue strip failure in the lower course is on the right edge of the shingle and in Figure H it is on the left edge of shingle. Since a single shingle is equally probable to fail on the left or right edge. The orange strip is the highest stressed region in the upper shingles due to bending in the lower course. As you can see in these figures no matter which side of a shingle fails first, the added stress due to bending, added to the already high suction loads on the shingle, will favor a left edge interaction failure.

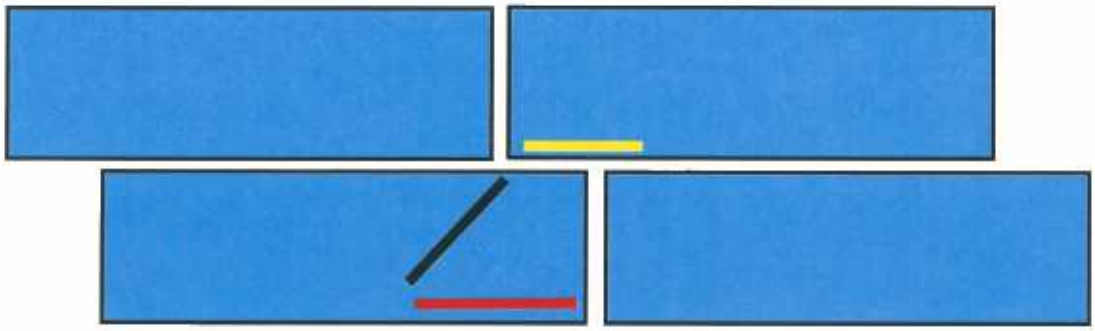


Figure G – Initiation of sealing failure at red line in left shingle

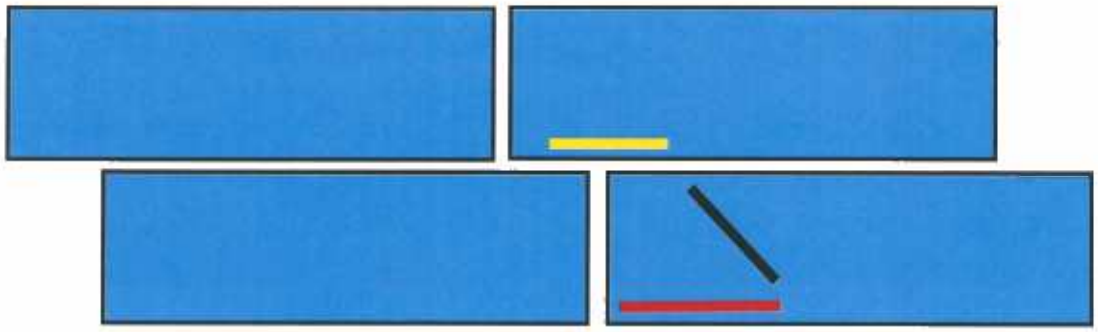


Figure H – Initiation of sealing failure at red line in right shingle

Roof Aging

The following is from Dixon et al. (2014)

> Thirty roofs in Florida and Texas were surveyed for unsealed shingles. All roofs contained unsealed shingles with occurrence of unsealing reaching up to 86% of the total amount of installed shingles. The quantity of unsealed shingles installed in the field of the roof generally increased with roof age, whereas the quantity of unsealed hip and ridge shingles showed no discernible relationship to roof age.

Asphaltic cements show a loss of VOC's over time and have decreased adhesion over time. The result is that asphalt shingles more prone to wind uplift damage as they age.

Conclusions

The following is based on my personal inspection of this roof system as discussed in this report, my professional experience both as a Professional Engineer but also as a research scientist.

- On July 14, 2016 a high wind event was experienced at the location of this residence.
- All roof shingles examined were installed using four or more nails.
- Nails were properly driven and meet expectations for installation.
- Nails were properly sized and had the required decking penetration. Figure 16

- Glue strips region showed fresh, clean signs of failure both at the boundary contact surface and structurally in the lower shingle
    - Figures 6, 7 and 19
    - Figures 9, 10 and 20 show portions of the lower shingle still sticking to the top shingle glue strip
- There is clear evidence that this roof sustained wind damage that exceed the capacity of the shingle to remain sealed to each other.
    - Evidence that wind speeds at this location created enough edge region turbulence to damage roof ridge. Figure 11
    - Evidence that wind speeds at this location created enough uplift to unseal individual shingles (with fresh clean signs of failure). Figure 6, 10, 12 and 13
    - Evidence that wind speeds at this location created enough uplift to unseal entire groups of shingles(with fresh clean signs of failure) . Figure 4
    - Evidence that wind speeds at this location created enough uplift to cause bending of unsealed shingles. Figure 8, 12, 13 and 14
    - Evidence that wind speeds at this location created enough uplift to cause shingles to pull over the installation nail. Figure 5 and 18
- Roof shingles as they age are more prone to damage from high winds.
- Roof shingles do not reseal.
- It takes higher wind speeds to cause nail head pull through than it does to unseal a shingle. This structure has a significant number of nail head pull throughs.
- In my opinion this roof requires complete replacement as a result of the wind damage that I observed and surveyed during my assessment. There is significant increased risk of additional damage if the roof is not replaced. The roof damage from this wind event makes the residence more prone to water intrusion.

References

Dixson, C.R., (2013) "The Wind Resistance of Asphalt Roofing Shingles", Doctoral Dissertation, University of Florida, pp. 198

Dixson, C.R., Masters, F.J., Prevatt, D.O., Gurley, K.R., Brown, T.M., Peterka, J.A. and Kubena, M.E., (2014) "The influence of unsealing on the wind resistance of asphalt shingles", *Journal of Wind Engineering and Industrial Aerodynamics*, Elsevier V. 130 pp. 30 – 40.

A. Appendix

Christopher C. E. Ramseyer

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Web site: http:/fears.ou.edu

EDUCATION

Ph.D.	University of Oklahoma (December 2005) Major: Structural Engineering Advisor: Kyran Mish Ph.D. Dissertation: *Axial Load Capacity of Cold-Formed Steel Sections*
M.S.	University of Oklahoma (December 1999) Major: Civil Engineering Advisor: Bruce Russell Ph.D., P.E. Thesis: *Investigation of Very Early Strength Concrete with Low Shrinkage Properties*
B.S.	University of Oklahoma (May 1998) Major: Civil Engineering, Engineering GPA = 4.0/4.0

REGISTRATION

State of California Professional Engineer, License No. C 61767
State of Oklahoma Professional Engineer, Registration No. PE 20860
State of Wyoming Professional Engineer, License No. PE 14509
State of Texas Professional Engineer, License No. 128564

PROFESSIONAL AWARDS AND HONORS

2016 The University of Oklahoma Vice President for Research Award for Improving Quality of Life and Communities.

2016 University of Oklahoma, Presidential International Travel Fellowship

2013 Creativity Oklahoma Renaissance Award from the Building Bridges, State of Creativity Forum

2013 Best Paper Award, for "Post-Damage Repair of Prestressed Concrete Girders" From the Korea Concrete Institute to Ramseyer, C., and Kang, T.

2013 The National Council of Structural Engineers Associations, Excellence in Structural Engineering Award, for the engineering design of SkyDance Bridge.

2013 BP DEVAS and BP Engineering Academy, Best Breakout Session Award

2012 Urban Design Citation Award as part of the Awards of Excellence Program from AIA Central Oklahoma with SXL for the Oklahoma City SkyDance Bridge.

2012 ENR (Engineering News Record) Award of Merit for the Oklahoma SkyDance Bridge in the Best Transportation Project classification for Texas, Oklahoma and Louisiana.

2012 IDEAS^2, National Certificate of Recognition from the American Institute of Steel Construction (AISC) for SkyDance Bridge

2012 Oklahoma City SkyDance Bridge is named as one of the 50 best public art projects by the Americans for the Arts

2012 P3 (People, Prosperity and the Planet) Award from the U.S. Environmental Protection Agency (EPA), with C. Graham, D. Butko, W. McManus and L. Holliday

2012 American Society of Civil Engineers, Commendation for Exceptional Service as Faculty Advisor

2012 Innovator of the Year Award, with SXL for the Oklahoma City SkyDance Bridge., The Journal Record Publishing Company

2011 George W. Tauxe, Outstanding Professor Award, University of Oklahoma

2010 Must-read Paper Picked by Editor-in-Chief, International Journal of Theoretical and Applied Multiscale Mechanics (IJTAMM), Inderscience Publisher, Ltd.

2008 First Place – Oklahoma City Bridge Competition with Butzer Design Partnership, for the Oklahoma City SkyDance Bridge.

2008 BP Professor Award, (awarded by the DEVAS and Eng. Academy students)

2007 Alumni Teaching Award, OU College of Engineering

2004 George W. Tauxe, Outstanding Professor Award, University of Oklahoma

2003 Most Dedicated Canoe Person of the Year (awarded by the OU-CEES students)

2002 Commitment Award (awarded by the OU-CEES students)

1998 Chi Epsilon, Civil Engineering Honor Society

1998 OSPE Engineering Achievement Award

1996-1998 OU President's Honor Roll

1996-1998 OU Dean's Honor Roll

1997 The National Dean's List

1997 G. B. Treat Memorial Scholarship

1996 R. L. O'Shields Scholarship

ENGINEERING EMPLOYMENT EXPERIENCE

Director	Donald G. Fears Structural Engineering Laboratory (presently on sabbatical)	5/08 to present
Associate Professor	University of Oklahoma, Norman, Oklahoma School of Civil Engineering and Environmental Science	7/12 to present
Assistant Professor	University of Oklahoma, Norman, Oklahoma School of Civil Engineering and Environmental Science	1/06 to 6/12
Adjunct Professor	University of Oklahoma, Norman, Oklahoma School of Civil Engineering and Environmental Science	8/00 to 12/05
Senior Design Engineer	Star Building Systems, Oklahoma City, Oklahoma. • Complete structural design of primary and secondary structure for 425+ buildings • Complexity 1-10 buildings, including multi-crane systems, mezzanines, canopies, roof top units, explosion venting and loading, skewed walls, hips and valleys, etc. • Building Codes: IBC, FEMA 302, UBC, BOCA and SBC	2/99 to 8/03
Graduate Research Assistant	University of Oklahoma, Norman, Oklahoma B. Russell Ph.D., P.E., School of Civil Engineering and Environmental Science *The development of statewide Portland cement patching products and procedures*	1/97 to 1/99

Teaching Assistant	University of Oklahoma, Norman, Oklahoma H. Gruenwald Ph.D., and J. Laguros Ph.D., P.E., Civil Engineering and Environmental Science • Technical support for AutoCad • Land Surveying lab assistant	1/96 to 1/97

RESEARCH RELATED EXPERIENCE

Summary: *To date, I have secured $3,938,016 in total research funding, with $2,041,975 in individual research credit. This includes 37 projects, 28 where I served as Principal Investigator. Of the 37 projects funded, 12 are National/International grants, 11 are State grants, 13 are Industry-sponsored research, and 1 is a University grant.*

Additionally I have raised $1,142,184 in direct donations to support research, $311,000 in kind material donations directly related to research, $91,900 in laboratory equipment donations, and $200,000 in capital improvement donations. Total value of these donations is $1,745,084

National / International Grants

1. "RAPID Response Research Grant to study residential lateral resistance systems"
   P.I.: Chris Ramseyer co-P.I.: Lisa Holliday & Royce Floyd
   Sponsor: National Science Foundation
   Amount: $7,000 (personal credit $6,000)
   Duration: 5/21/13 to 6/14/13

2. "RET (Research Experience for Teachers) Site: Strengthening a K12 Learning Community through Engineering Research"
   P.I.: Chen Ling co-P.I.: Mark Nanny, U. Matthias, Randa Shehab, Hazem Refai, Patricia Hardre, Chris Ramseyer
   Sponsor: National Science Foundation
   Amount: $300,000.00 (personal credit $10,000)
   Duration: 7/1/10 to 1/14/12

3. "Stability of concrete slabs on grade considering shrinkage and a moisture gradient"
   P.I.: Chris Ramseyer, OU
   Sponsor: Oklahoma Transportation Center
   Amount: $199,000.00
   Duration: 1/15/10 to 1/14/12

4. "Optimum cable barrier design and placement for the state of Oklahoma"
   P.I.: Chris Ramseyer, OU co-P.I.: Wilson Brewer, Langston University
   Sponsor: Oklahoma Transportation Center
   Amount: $275,000.00 (personal credit $150,000)
   Duration: 1/15/10 to 1/14/12

5. "Evaluation of the Effectiveness of ODOT's Cable Barrier Program"
   P.I.: Chris Ramseyer, OU
   Sponsor: Oklahoma Transportation Center
   Amount: $84,422.00
   Duration: 10/01/09 to 9/31/10

6. "Facilitated Experimental Learning Program – Camp Concrete"
   P.I.: Wilson Brewer, Langston University Co-P.I.: Chris Ramseyer, OU
   Sponsor: Oklahoma Transportation Center
   Amount: $225,000.00 (personal credit $150,000)
   Duration: 06/01/09 to 05/31/12

7. "Interstate 35 Bridge Instrumentation Renaissance"
   P.I.: David Baldwin, co-PI Chris Ramseyer,
   Sponsor: Oklahoma Transportation Center
   Amount: $176,600.00 (personal credit $35,320)
   Duration: 9/15/10 to 9/14/12

8. "Cooperative Agreement with DoD ERDC on Magazine Safety"
   P.I.: Kim Mish, Co-P.I.: Chris Ramseyer
   Sponsor: U.S. Army Corps of Engineers
   Amount: $104,000.00 (personal credit $15,600)
   Duration: 09/01/08 to 08/30/10

9. "Work Program for FY05 OTC Appropriation Through Federal Highway Administration: Turner-Fairbank Research Center"
   P.I.: Musharraf Zaman, Co-PI Chris Ramseyer
   Sponsor: Federal Highway Administration (FhWA)
   Amount: $1,155,001 (personal credit 9% = $103,950)
   Duration: October 2006 to September 2008

10. "Development of Repair and Strengthening Methods for End Damage on AASHTO Girders"
    P.I.: Chris Ramseyer Co-P.I.: Kyran Mish
    Sponsor: Oklahoma Transportation Center (OTC)
    Amount: $50,000 (personal credit $40,000)
    Duration: January 2006 to September 2006

11. "The Bridges of the Future can be Created Here Today"
    P.I.: Kyran Mish, Co-P.I. Chris Ramseyer
    Sponsor: Oklahoma Transportation Center (OTC)
    Amount: $222,015 (personal credit 20% = $44,403)
    Duration: January 2006 to December 2007

12. "Mechanical Activation of Fly Ash for Concrete"
    P.I.: Chris Ramseyer, Co-P.I.: Beth Brueggen
    Sponsor: Oklahoma Transportation Center (OTC)
    Amount: $40,000 ($24,000 personal credit)
    Duration: May 2004 to December 2005

State Grants

1. "Innovative Bridge Research Project – Self Consolidating Concrete for Bridge Beams",
   P.I.: Chris Ramseyer, Co-P.I.: Thomas Kang,
   Sponsor: Oklahoma Department of Transportation (ODOT),
   Amount: $125,000 (personal credit $87,500),
   Duration: April 2007 to September 2008

2. "Innovative Bridge Research Project – Sandwich Plate System for SH7 Keel Creek Bridge"
   P.I.: Chris Ramseyer
   Sponsor: Oklahoma Department of Transportation (ODOT)
   Amount: $100,000
   Duration: April 2007 to September 2008

3. "Investigation of Cost Effective Truck Weight Enforcement"
   P.I.: Chris Ramseyer, Co-P.I.: Kyran Mish
   Sponsor: Oklahoma Department of Transportation (ODOT)
   Amount: $80,000 (personal credit $64,000)
   Duration: October 2006 to September 2007

4. "Optimizing Concrete Mix Designs to Produce Cost Effective Paving Mixes."
   P.I.: Chris Ramseyer, Co-P.I. Kyran Mish
   Sponsor: Oklahoma Department of Transportation (ODOT)
   Amount: $50,000 (personal credit $45,000)
   Duration: October 2006 to September 2007

5. "Monitor Existing and New Bonded Overlay Projects in the State of Oklahoma"
   P.I.: Chris Ramseyer, Co-P.I.: Kyran Mish
   Sponsor: Oklahoma Department of Transportation (ODOT)
   Amount: $80,000 ($72,000 personal credit)
   Duration: February 2006 to May 2007

6. "Stress Monitoring of the I-40 at Lake Eufaula Bridge"
   P.I.: Chris Ramseyer
   Sponsor: Oklahoma Department of Transportation (ODOT)
   Amount: $12,034 ($9627.20 personal credit)
   Duration: June 2005 to December 2005

7. "Innovative Bridge Research Project – Use of HPC for a Crack Free Bridge Deck"
   P.I.: Chris Ramseyer
   Sponsor: Oklahoma Department of Transportation (ODOT)
   Amount: $10,000
   Duration: April 2005 to September 2005

8. "Creation of an Oklahoma Department of Transportation Specification for Patching or Overlay of Bridge Decks"
   P.I.: Chris Ramseyer
   Sponsor: Oklahoma Department of Transportation (ODOT)
   Amount: $285,000 total
   Duration: October 2004 to September 2008

9. "Investigation into the use of Portland Cement Concrete with Fiber Additives for Bridge Decks in the State of Oklahoma"
   P.I.: Chris Ramseyer
   Sponsor: Oklahoma Department of Transportation (ODOT)
   Amount: $49,300
   Duration: September 2003 to October 2004.

10. "Investigation of Patching Materials for Portland Cement Concrete Pavements in the State of Oklahoma"
    P.I.: Chris Ramseyer
    Sponsor: Oklahoma Department of Transportation (ODOT)
    Amount: $38,750
    Duration: September 2003 to October 2004.

11. "Investigation of Methods to Reduce or Eliminate End Region Corrosion of Pre-Stressed Concrete Bridge Girders"
    P.I.: Chris Ramseyer
    Sponsor: Oklahoma Department of Transportation (ODOT)
    Amount: $31,225
    Duration: September 2003 to October 2004

Industry-Sponsored Research

1. "Monotonic and dynamic Lateral Load Tests for sheathing systems"
   P.I.: Shideh Shadravan co-P.I.: Chris Ramseyer
   Sponsor: American Plywood Association, (APA)
   Amount: $18,000 (personal credit $1,800)
   Duration: 9/1/17 to 12/31/17

2. "Lateral Load Tests for Tornado Resistance"
   P.I.: Shideh Shadravan co-P.I.: Chris Ramseyer
   Sponsor: IBHS
   Amount: $59,000 (personal credit $8,850)
   Duration: 7/28/16 to 7/28/17

3. "Curl and Shrinkage of Concrete Slabs on Grade."
   P.I.: Chris Ramseyer
   Sponsor: CTS – Cement Manufacturing Corp
   Amount: $119,666
   Duration: August 2007 to September 2008

4. "Bridge Overlay Study Using Rapid Set Latex Modified - LOP Modified Cement"
   P.I.: Chris Ramseyer
   Sponsor: CTS – Cement Manufacturing Corp
   Amount: $75,000
   Duration: August 2006 to September 2008

5. "Axial, Bending and Pressure Testing of Large Pipe Connections"
   P.I.: Chris Ramseyer
   Sponsor: Franks Casing Crew
   Amount: $70,520 ($56,416 personal credit)
   Duration: August 2005 to August 2006

6. "Bending Capacity of Cold Formed Steel Purlins with an Innovative Bracing System Using the Base Test Method"
   P.I.: Chris Ramseyer
   Sponsor: Star Building Systems
   Amount: $10,008 ($8006.40 personal credit)
   Duration: August 2005 to August 2006

7. "Bridge Overlay Study Using Rapid Set Latex Modified Cement"
   P.I.: Chris Ramseyer
   Sponsor: CTS – Cement Manufacturing Corp
   Amount: $37,500
   Duration: July 2005 to August 2006

8. "Cold formed Zee Purlin Capacity Study with Interaction of Web Stiffeners"
   P.I.: Chris Ramseyer
   Sponsor: Star Building Systems
   Amount: $7,850
   Duration: June 2005 to December 2005

9. "Improved Blended Cement with Large Fly Ash Replacement"
   P.I.: Chris Ramseyer, Co-P.I.: Beth Brueggen
   Sponsor: LaFarge North America Inc.
   Amount: $21,000 ($19,950 personal credit)
   Duration: April 2005 to September 2005

10. "Stress Monitoring of Bridge Girders While Bridge Jacking"
    P.I.: Chris Ramseyer, Co-P.I.: Kyran Mish
    Sponsor: Duit Construction and Muskogee Bridge Company
    Amount: $3,100 ($2,325 personal credit)
    Duration: February 2005 to September 2005

11. "Analytical and Experimental Testing of Press Formed Purlin Anchorage Clips"
    P.I.: Chris Ramseyer
    Sponsor: Star Building Systems
    Amount: $4,250
    Duration: November 2003 to May 2004

12. "Cold Formed Steel Joist Buckling Capacity Testing"
    P.I.: Chris Ramseyer
    Sponsor: Star Building Systems
    Amount: $4,461
    Duration: October 2002 to August 2003

13. "Inelastic Capacity of the Bearing Seat, End Panel Diagonal, and End Panel Chord for Cold Form Steel Joists"
    P.I.: Chris Ramseyer
    Sponsor: Star Building Systems
    Amount: $23,000
    Duration: June 2001 to December 2003

University Grants

1. "XACT Imaging of Concrete Structures"
   P.I.: Liangzhong Xiang co-P.I.: Chris Ramseyer
   Sponsor: OU Research Council
   Amount: $15,000 (personal credit $7,500)
   Duration: 4/28/16 to 4/28/17

Unfunded Research Projects

1. Evaluation of Integral Abutment Bridges in the state of Missouri
   P.I.: Chris Ramseyer
   Duration: August 2010 to December 2010

2. "Pier and Grade Beam Foundation Systems"
   P.I.: Chris Ramseyer
   Duration: 20070 to 2009

3. "Bending Capacity and Behavior of Large Concrete Filled Steel Tubes"
   P.I.: Chris Ramseyer
   Duration: December 2004 to December 2005 & 2010-2011

4. "Research on the Axial Load Capacity of Sheeted Cold-Formed, Large Z Sections"
   P.I.: Chris Ramseyer
   Duration: February 2002 to December 2003.

5. "Mechanical and Chemical Activation of Fly Ash Used in Portland Cement Concrete"
   P. I.: Chris Ramseyer
   Duration: August 2002 to August 2003

Direct Donations to Support Research

Chris Ramseyer Structural Engineering Scholarship Fund

Donors:	Value of Donation:
CTS Cement Manufacturing Corp	$75,184 - September 2010
Manhattan Bridge Co.	$1,000 - January 2011
Manhattan Bridge Co.	$11,000 - July 2011
CTS Cement Manufacturing Corp	$45,000 - September 2011
Manhattan Bridge Co.	$1,000 – February 2012
CTS Cement Manufacturing Corp	$100,000 - May 2012
CTS Cement Manufacturing Corp	$150,000 – August 2012
CTS Cement Manufacturing Corp	$200,000 – December 2012
Manhattan Road & Bridge Co.	$10,000 - February 2013
CTS Cement Manufacturing Corp	$75,000 – December 2013
Anonymous	$12,000 – July 2014
CTS Cement Manufacturing Corp	$50,000 – July 2015
Anonymous	$12,000 – July 2015
CTS Cement Manufacturing Corp	$50,000 – May 2016
CTS Cement Manufacturing Corp	$150,000 – October 2017
CTS Cement Manufacturing Corp	$250,000 – December 2017

Total Value of Donation: **$1,142,184**

In-Kind Donations Directly Related to Research

Donors: Star Building Systems, LaFarge North America, Holcim, Dolese, Capital Steel, W & W Steel, WR Grace, HKS Iron, CSC Inc., PVS Chemical, Xypex, Nycon Fibers, FiberMesh, Sika, CTS Cement Manufacturing Corp, Franks Casing Crew and 3M

Items: Cold formed steel specimens, portland cement, clinker, fly ash, large aggregate, sand, steel plate, large steel tubes and pipe, admixtures, steel fabrication, raw chemicals, latex additive, fibers, CalciumSulphanoAluminate Cement, 30" diameter thick well casing, micro beads, (60) 3000 lb concrete blocks, (2) 10,,000 lb steel beam **$311,000**

Laboratory Equipment Donations

Donors: LaFarge North America, W and W Steel, and Chris Ramseyer Estimated Value: **$27,900**
Items: Ball mill, data acquisition system and strong floor covers

Donor: Ideal Homes - August 2011 Estimated Value: **$9,000**
Items: (3) Port-a-Cool, evaporative cooling units

Donor: Boeing Aircraft – March 2016. Estimated Value **$55,000**
Items: (11) blade servers, blower fans, rack systems

Capital Improvement Donations

Donor: Star Building Systems – August 2006, Estimated Value: **$110,000**
Items: 30' x 144'-7" (4338 sq ft) Expansion to Fears Structural Engineering Laboratory

Donor: – Wilkins Construction, Rinker Materials, Dolese, Urban Contractors and Hearon Steel - August 2007 Estimated Value: **$14,000**
Items: Culverts and concrete drives on the West side of Fears Structural Engineering Laboratory

Donor: CTS Cement Manufacturing Corp - August 2008, Estimated Value: **$50,000**
Items: 30' x 60' (1800 sq ft) Advanced Concrete Research Laboratory

Donor: W & W Steel, Dolese and ODOT Estimated Value: **$26,000**
December 2010 – (ongoing project) Items: 800 linear feet of solid metal panel fencing to enclose the field research site.

PUBLICATIONS AND PRESENTATIONS

Summary: *I have 1 book, 33 refereed journal articles published or in review (27 published, 5 accepted and 1 in review). I have 26 refereed conference proceedings (26 published, 1 accepted). I have issued 24 technical reports and 4 chapters or sections of refereed documents. I have made 7 International presentations and have one scheduled for 2018, 51 National presentations and 95 invited presentations.*

Books

1. William L. Coulbourne, P.E.; David O. Prevatt, Ph.D., P.E.; T. Eric Stafford, P.E.; Christopher C. Ramseyer, Ph.D., P.E.; and John M. Joyce, P.E., "Moore, Oklahoma, Tornado of 2013, Performance of Schools and Critical Facilities", ASCE 2015 64 pages

Refereed Journal Articles

1. Sherry, S. and Ramseyer, C. "Assessment of Partial Joint Penetration Welds on Bolted End-plate Connections for Use in Intermediate Moment Frames", *Engineering Journal* AISC, Submitted Dec 2017 – Under Review

2. Ramseyer, C., Holliday, L. and Sherry, S. "Lessons Learned from Two Elementary School Collapses During the May 20th, 2013 Moore Tornado", *ASCE Journal of Performance of Constructed Facilities*, Submitted Dec. 2017 – Accepted for Publication

3. Tang, S., Ramseyer, C., Samant, P. and Xiang, L., "X-ray-Induced Acoustic Tomography of Concrete Intrastructure". *Applied Physics Letters* – Accepted for Publication

4. Kang, H.-K., De Bruyn, K., Bescher, E., Hong, S. and Ramseyer, C.," Porosimetric Features of Calcium Sulfoaluminate and Portland Cement Pastes: Review of Testing Protocols and Analysis of Results", *Journal of Structural Integrity and Maintenance,* Taylor and Francis, Submitted Nov 2016 – Accepted for Publication

5. Nghiem, A., Kang, H.-K., Minsun, L., Ramseyer, C. and Lee, C-H., "Flexural Testing of Circular Concrete-Filled Tubes without Axial Forces", *ACI Structural Journal,* Submitted Apr. 2016 – Accepted for Publication

6. Ramseyer, C., Holliday, L. and Floyd, R., "Performance of Enhanced Residential Building Code Requirements During the March 25, 2015 Moore Tornado", *ASCE Journal of Performance of Constructed Facilities*, Submitted May 2016 – Accept for Publication

7. Tang, S., Nguyen, D. H., Sarafshani, A., Ramseyer, C., Zheng, B., Liu, H. and Xiang, L., "X-ray-Induced Acoustic Tomography with an Ultrasound Ring-Array". *Applied Physics Letters* – 110(10), 06-MAR-17(2017).

8. Roswurm, J. and Ramseyer, C. "Investigation into the influence of Sand Angularity on the Standard Test for Strand Bond", *PCI Journal*, Precast/Prestressed Concrete Institute, Volume 62, Number 2, pp. 101-112 ISSN: 0887-9672, March-April 2017

9. Ramseyer, C., and Shadravan, S., " Bending Capacity of Cold Formed Z-Purlins Supporting a Standing Seam Roof System with Torsional Bracing", *Journal of Structural Integrity and Maintenance*, Taylor and Francis, Vol. 11, pp. 59-68, ISSN: 1976-0485, March 2017

10. De Bruyn, K., Bescher, E., Ramseyer, C., Hong, S. and Kang, H.-K., "Pore Structure of Calcium Sulfoaluminate Paste and Durability of Concrete in Freeze-Thaw Environment",*International Journal of Concrete Structures and Materials*, ISSN 1976-0485 December 2016

11. Hardre, P., Shehab, R., Ling, C., Herron, J., Nanny, M., Nollert, M., Refai, H., Ramseyer, C., Wollega, E., "Situating Teachers' Developmental Engineering Experiences in an Inquiry-based, Laboratory Learning Environment", *Journal of Teacher Development,* Taylor & Francis volume 21, number 2, April 2017, on line Sept 2016

12. Bescher, E., Rice, E.K., Ramseyer, C. and Roswurm, S.," Sulfate Resistance of Calcium Sulphoaluminate Cement", *Journal of Structural Integrity and Maintenance*, Taylor and Francis, 1:3, pp. 131-139 ISSN: 2470-5314 September 2016

13. Lisa Holliday, Chris Ramseyer, Matthew Reyes, and Daniel Butko, "Building with Compressed Earth Block within the Building Code", *ASCE Journal of Architectural Engineering*, ISSN: 1076-0431 Volume 22, Issue 3, September 2016

14. Ramseyer, C., Roswurm, S., "Behavior of Type K Shrinkage Compensating Concrete Under Various Forms of Mechanical Restraint", *ACI Special Publication 307; Shrinkage Compensating Concrete – Past, Present and Future*, ACI, March 2016 pp. 41-52 ISBN-13: 978-1-942727-70-5

15. Shadravan, S., Ramseyer, C., and Kang, T., "Dimensional Stability of Concrete Slabs-on Ground", *ACI Special Publication 307; Shrinkage Compensating Concrete – Past, Present and Future*,, ACI, March 2016 pp. 53-65 ISBN-13: 978-1-942727-70-5

16. McLean, E., Ramseyer, C., Roswurm, S., "600 Crack-Free Bridges Using Shrinkage Compensating Concrete", *ACI Special Publication 307; Shrinkage Compensating Concrete – Past, Present and Future*,, ACI, March 2016 pp. 85-100 ISBN-13: 978-1-942727-70-5

17. Ramseyer, C., Renevier, K., "Behavior of Shrinkage Compensating Concrete in an Unrestrained and Restrained Environment", *ACI Special Publication 307; Shrinkage Compensating Concrete – Past, Present and Future*,, ACI, March 2016 pp. 101-112 ISBN-13: 978-1-942727-70-5

18. Shadravan, S., Ramseyer, C., and Kang, T., "A Long Term Restrained Shrinkage Study of Concrete Slabs on Ground", *Engineering Structures*, Elsevier. Nov. 2015 pp. 258-265

19. Ramseyer, C., Holliday, L. and Floyd, R., "Enhanced Residential Building Code for Tornado Safety", *ASCE Journal of Performance of Constructed Facilities*, DOI: 10.1061/(ASCE)CF.1943-5509.0000832. October 20, 2015

20. Kang, T.H.-K, Biggs, K., and Ramseyer, C., "Buckling Modes of Cold-Formed Steel Columns", *International Journal of Engineering and Technology*, V.5, No. 4, Aug. 2013, pp. 447- 451.

21. Hardre, P., Shehab, R., Ling, C., Herron, J., Nanny, M., Nollert, M., Refai, H., Ramseyer, C., Wollega, E., "Designing and Evaluating a K-12 STEM Teacher Learning Opportunity in the Research University", *Journal of Teacher Education - Evaluation and Program Planning,* 43C (2014), 73-82. *Online First 12/2013;* DOI: 10.1016/j.evalprogplan.2013.11.002

22. Hardre, P., Ling, C., Shehab, R., Nanny, M., Nollert, M., Refai, H., Ramseyer, C., Herron, J., Wollega, E., "Teachers in a Learning Community: Engaging, Integrating and Strengthening K-12 Education", *Journal of Teacher Education,* American Association of Colleges for Teacher Education. Vol.64, No. 5, October 2013. Pp. 410-4256 DOI: 10.1177/0022487113496640

23. Piyawat, K., Ramseyer, C., and Kang, T., "Development of an Axial Load Capacity Equation for Built-Up Cold Formed Sections", *ASCE Journal of Structural Engineering,* Volume 139, Issue 12 December 2013

24. Ramseyer, C., and Kang, T., "Post-Damage Repair of Prestressed Concrete Girders", *International Journal of Concrete Structures and Materials*, InderScience Publishers, Vol. 6, No. 3, September 2012, ISSN 1976-0485 pp. 199-207

25. Freyne, S., Ramseyer, C., and Giebler, J., " High Performance Concrete Designed to Enhance Durability of Bridge Decks: An Oklahoma Experience*", ASCE Journal of Materials in Civil Engineering*, Vol. 24, No. 7, July 2012. Pp. 933-936 ISSN 0899-1561

26. Piyawat, K., Ramseyer, C., and Kang, T., "Nonlinear Buckling of Built-Up Cold-Formed Sections", *International Journal of Theoretical and Applied Multiscale Mechanics*, Inderscience Publishers Vol.2, No. 2, November 2011. Pp. 146-164

27. Kim, W., Piyawat, K., Ramseyer, C., and Kang, T., "Experimental and Numerical Simulations of Prestressed Self-Consolidating-Concrete Structures Subjected to Non-Linear Deformations", *International Journal of Theoretical and Applied Multiscale Mechanics*, InderScience Publishers, Vol. 1, No. 4 December 2010. Pp. 319-338

28. Probst, A., Kang, T., Ramseyer, C. and Kim, U., "Composite Flexural Behavior of Full-Scale Concrete Filled Tubes without Axial Loads" *ASCE Journal of Structural Engineering*, V. 136, No. 11, pp. 1401-1412, November, 2010.

29. Brueggen, B., Kang, T. and Ramseyer, C., "Experiments and SEM Analyses of Ground Fly Ash in Concrete " *International Journal of Concrete Structures and Materials*, InderScience Publishers, Vol. 4, No. 1, pp. 51-54, June 2010, ISSN 1976-0485

30. Huang, Y., Kang, T., Ramseyer, C., and Rha, C. , "Background to Multi-Scale Modeling of Unbonded Post-Tensioned Concrete Structures", *International Journal of Theoretical and Applied Multiscale Mechanics*, InterScience Publishers, January 2010, Vol. 1, Issue 3 pp 219 – 235 Note: Selected as the "must-read" paper by the editor.

31. Whittle, J. and Ramseyer, C.C., " Buckling Capacities of Axially Loaded, Cold-Formed, Built-Up C-Channels" *Thin-Walled Structures*, Elsevier Vol. 47 February 2009, pp. 190-201, ISSN 0263-8231

32. Ramseyer, C., Chancellor, B., and Kang, T., "Economic and Fast-track Rehabilitation of Concrete Pavements and Bridge Decks" *International Journal of Concrete Structures and Materials*, InderScience Publishers, Vol. 2, No. 2, pp. 107-113 December 2008, ISSN 1976-0485

33. Myers, D., Kang, T. and Ramseyer, C., "Early-Age Properties of Polymer Fiber-Reinforced Concrete" *International Journal of Concrete Structures and Materials*, InderScience Publishers, Vol. 2, No. 1, pp. 9-14 , June 2008, ISSN 1976-0485

Refereed Conference Proceedings

1. Bescher, E., Kim, J., Ramseyer, C. and Vallens, J.K., "Low Carbon Footprint Pavement: History of Use, Performance and New Opportunities for Calcium Sulfoaluminate Pavement" 13th International Symposium on Concrete Roads, Berlin, Germany June 2018 - Accepted

2. Shadravan, S. and Ramseyer, C., "Torsional Bracing of Cold-Formed Roof Systems", 2017 AEI Convention, Oklahoma City, Oklahoma, April 2017

3. Floyd, R. and Ramseyer, C., "Behavior of Precast, Prestressed Calcium SulfoAluminate Cement Concrete Beams", 2016 PCI Convention and National Bridge Conference Proceedings

4. Seek, M., Ramseyer, C. and Kaplan, I., "A Combined Direct Analysis and Direct Strength Approach to Predict the Flexural Strength of Z-Purlins with Paired Torsion Braces" International Specialty Conference on Cold-Formed Steel Structures 2016, Missouri University of Science and Technology

5. Holliday, L., and Ramseyer, C. "Reinforcing Compressed Earth Blocks with Geo-Fabric", *Earth USA 2015 8th International Earthbuilding Conference*, Santa Fe, New Mexico, October 2015.

6. Dyer, J., Ramseyer, C., Duclaux, K., Sluss, J., Pulat, P., "A Semester-Long Study Abroad Model for Engineering Students - The Unified Project Approach", Frontiers in Education (FIE), American Society of Engineering Educators, Conference, El Paso Texas, October 24, 2015

7. Ramseyer, C., Floyd, R., Holliday, L. & Roswurm. S., "Influence of Lateral Load Bracing Systems on Damage and Survivability of Residential Structures Impacted by the Moore Oklahoma Tornado of May 20th, 2013", *ASCE-SEI Structures Congress*, Boston, Massachusetts, April 2014.

8. Butko, D., Holliday, L., Reyes, M., Ramseyer, C. & Hatami, K., "Returning to Earth: analyzing and designing earthen structures for sustainable design", *ACSA (Association of Collegiate Schools of Architecture) Fall Conference*, Fort Lauderdale, Florida, October 2013.

9. Holliday, L., Ramseyer, C. & Frame, M., "Shear Strength of Compressed Earth Block Walls", *Earth USA 2013 7th International Earthbuilding*, Santa Fe, New Mexico, October 2013.

10. Kang, T.H.-K., Biggs, K., and Ramseyer, C., "Buckling Modes of Cold-Formed Steel Columns," Proceedings, The 2nd International Conference on Civil Engineering and Materials, Hong Kong, July 2013.

11. Ramseyer, C. and Bescher, E., "Performance of Concrete Rehabilitation Using Rapid Setting Calcium Sulfo-Aluminate Cement at the Seattle-Tacoma Airport" 93rd Annual Meeting of the Transportation Research Board, Washington DC January 2013

12. Bescher, E., Stremfel, J, Ramseyer, C. and Rice, E.K.,"The role of calcium sulfoaluminate in concrete sustainability", *Twelfth International Conference on Recent Advances in Concrete Technology and Sustainability Issues*, Prague, Czech Republic, Oct. 2012

13. Kang, T.H.-K., Piyawat, K., and Ramseyer, C., "Design Buckling Strength Curve for Built-Up Cold-Formed Sections," Proceedings, The 6th International Symposium on Steel Structures, Seoul, Korea, Nov. 2011.

14. Piyawat, K., Kim, W., Ramseyer, C. and Kang, T.H.-K., "ANSYS & OpenSees Modeling of Pre-Tensioned Prestressed Concrete Beams," Proceedings, Mini Symposium–Computational Modeling of Prestressed Concrete Structures, *The 2011 International Conference on Computational Technologies in Concrete Structures*, Seoul, Korea, Sept. 2011.

15. Holliday, L., Ramseyer, C.C. & Grant, H., "Masonry Block Construction in Haiti", *Wessex Institute of Technology, 8th International Conference on Earthquake Resistant Engineering Structures*, Chianciano Terme, Italy, September 2011.

16. Ramseyer, C., McLean, E., Davis, C., Gummersheimerm B., Trautman, B., Martens, P., Amos, D., Schmidt, I., Diaz, L. and Sharp, R., "Experience with Rapid Setting, Low Permeability Bridge Overlays in the St. Louis Area" TRB, January 2011.

17. Ramseyer, C.C. & Perez, V., "Highway Panel Replacement – The California Experience", *Concrete Pavement Technology Program, Federal Highway Administration*, Proceedings of the International Conference on Optimizing Paving Concrete Mixtures & Accelerated Concrete Pavement Construction and Rehabilitation, St. Louis, Missouri April 2009

18. Ramseyer, C.C., "Camp Concrete – Growth of a Graduate Program" *American Society for Engineering Education*, Annual Conference and Exposition, Pittsburgh, Pennsylvania June 2008

19. Ramseyer, C.C. and Chancellor, B., "Economical Rehabilitation of Concrete Pavements", *Concrete Pavement Technology Program, Federal Highway Administration*, International Conference on Optimizing Paving Concrete Mixtures and Accelerated Concrete Pavement Construction and Rehabilitation, Atlanta, Georgia November 2007

20. Ramseyer, C.C., "An experiment in Undergraduate Research" *American Society for Engineering Education*, Annual Conference and Exposition, Honolulu, Hawaii June 2007

21. Carmen Diaz & Ramseyer, C.C., "Dynamic Testing of Rammed Earth Scale Models", *The Adobe Association of the SouthWest*, AdobeUSA BiAnnual Conference, El Rito New Mexico, May 2007

22. Shadravan, S. and Ramseyer, C.C., "Bending Capacity of Cold Formed Steel Purlins with Torsional Bracing Using The Base Test Method ", Annual Stability Conference, *Structural Stability Research Council*, New Orleans, Louisiana, April 2007.
    - NOTE: This paper is cited in the 2007 AISI North American Specification for the Design of Cold-Formed Steel Structural Member in section D3 Lateral Bracing of the Specification and Commentary, which I helped author.

23. Brueggen, B.L. and Ramseyer, C.C., "Finite Element Modeling of Cold-Formed Steel Joist Systems", Annual Stability Conference, *Structural Stability Research Council*, Montreal, Quebec, April 2005.

24. Thottunkal, V.J. and Ramseyer, C.C., "Axial Capacity of Deep Z Sections", Annual Stability Conference, *Structural Stability Research Council*, Montreal, Quebec, April 2005.

25. Brueggen, B.L. and Ramseyer, C.C., "Capacity of Built-Up, Cold-Formed Steel Axial Compression Members", Annual Stability Conference, *Structural Stability Research Council*, Montreal, Quebec, April 2005.

26. Ramseyer, C.C., and Brueggen, B. L., "Camp Concrete – An experiment in Undergraduate Research" *American Society for Engineering Education*, Annual Meeting of the Midwest Section, Fayetteville, Arkansas, September 2005

27. Ramseyer, C.C., Russell, B.W., and Bush, T.D., "Investigation of Very Early Strength Portland Cement Concrete Suitable for Patching Rigid Pavements", Transportation Research Board Compilation of Practical Papers, Washington D.C. January 1999.

Technical Reports

1. Andrew Graettinger, Chris Ramseyer, Seamus Feyne, David Prevatt, Laura Myers, Thang Dao, Royce Floyd, Lisa Holliday, Duzgun Agdas, Fred Haan, Jim Richardson, Rakesh Gupta, Robert Emerson and Christine Alfano, *Tornado Damage Assessment in the aftermath of the May 20th, 2013 Moore, Oklahoma Tornado*, Final Report to NSF, March 2014, 133 pp.

2. Baldwin, J., Ramseyer, C.C., Runolfsson, T., and Kroll, A., *Interstate-35 Bridge Instrumentation Renaissance*, ODOT September 2012

3. Ramseyer, C.C., Baker, J., Roswurm, S., *Unrestrained and Restrained Vibrating Wire Strain Gauge Shrinkage/Expansion Testing*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, December 2012, 19 pp

4. Ramseyer, C.C. and Giebler, J., *Use of High Performance Concrete in Oklahoma Bridge Decks*, Final Report – FHWA-OK-10-03 ODOT IBR Item Number 105N(107)IB# 20296(05), March 2010, 333 pp

5. Ramseyer, C.C. and Gastgeb, M., *Creation of an ODOT Specification for Patching or Overlay of Bridge Decks, Volume I*, Final Report – FHWA-OK-08-09 ODOT SPR Item Number 2184, March 2009, 98 pp

6. Ramseyer, C.C. and Myers, G., *Creation of an ODOT Specification for Patching or Overlay of Bridge Decks, Volume II*, Final Report – FHWA-OK-08-09 ODOT SPR Item Number 2184, March 2009, 200 pp

7. Ramseyer, C.C. and Kiamanesh, R., *Optimizing Concrete Mix Designs to Produce Cost Effective Paving Mixes*, Final Report – FHWA-OK-08-11 ODOT SPR Item Number 2199, March 2009, 122 pp

8. Ramseyer, C.C., *Report on Historical Rapid Set Overlays in Tulsa*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, September 2007, 29 pp

9. Ramseyer, C.C., *Report on Development of Repair and Strengthening Methods for End Damage on AASHTO Girders*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, December 2006, 28 pp.

10. Gastgeb, M. Cortney, W., and Ramseyer, C.C., *Report on Curing Effects on Rapid Set® Latex Modified Cement Bridge Deck Overlays*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, August 2006, 9 pp.

11. Giebler, J., and Ramseyer, C.C., *Report on the Use of High Performance Concrete in Oklahoma Bridge Decks*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, July 2006, 324 pp.

12. Ramseyer, C.C., *Report on Stress Monitoring of the I-40 and Lake Eufaula Bridge*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, June 2006, 22 pp.

13. Kiamanish, R., and Ramseyer, C.C., *Report on Improved Blended Cement with Large Fly Ash Replacement*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, September 2006, 102 pp.

14. Kiamanish, R., and Ramseyer, C.C., *Report on Mechanical Activation of Fly Ash for Concrete*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, September 2006, 68 pp.

15. Kao, J.T. and Ramseyer, C.C., *Report on Portland Cement Concrete with Fiber Additives for Bridge Decks in Oklahoma*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, January 2006, 98 pp.

16. Myers, D. and Ramseyer, C.C., *Report on Fiber-Reinforced Concrete and Bridge Deck Cracking,* Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, January 2006, 106 pp.

17. Thottunkal, V.J. and Ramseyer, C.C., *Report on Axial Load Capacity of Cold-Formed Z Sections*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, October 2004, 73 pp.

18. Chancellor, B. and Ramseyer, C.C., *Report on Very Early Strength Concrete for Patching*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, September 2004, 114 pp.

19. Brueggen, B.L. and Ramseyer, C.C., *Inelastic Finite Element Modeling of Cold Formed Steel Joists*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, September 2004, 155 pp.

20. Brueggen, B.L. and Ramseyer, C.C., *Report on Press-Formed Purlin Clip Anchorage Testing*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, August 2004, 111 pp.

21. Brueggen, B.L. and Ramseyer, C.C., *Report on Cold Formed Steel Joist Member Buckling Capacity Testing*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, August 2003, 25 pp.

22. Brueggen, B.L. and Ramseyer, C.C., *Report on Inelastic Finite Element Modeling of Cold Formed Steel Joists*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, January 2003, 17 pp.

23. Brueggen, B.L. and Ramseyer, C.C., *Report on Cold Formed Steel Joist Weld Connection and End Region Testing*, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, University of Oklahoma, June 2002, 32 pp.

24. Russell, B.W., Bush, T.D., Mooney M., and Ramseyer, C.C., *Development of Statewide Portland Cement Patching Products and Procedures - Interim Report*, Presented to ODOT, June 1997

Other Peer-Reviewed Publications (1 Building Code and 3 Chapters/Sections Published)

1. Chris Ramseyer and Lisa Holliday, *Moore Residential Building Code,* 2014 Revisions - residential construction to withstand an EF-2 tornado

2. Ramseyer, C.C., & Myers, D., Section 505, "Overlay of Concrete Bridge Decks" and Section 513, "Repair of Concrete Bridge Decks", ODOT, *2009 Standard Specifications for Highway Construction.* Edited by the Specification Section 500 Committee – of which I was a member, November 2009

3. Ramseyer, C.C., Section 701.12 "Very Early Strength Type I Concrete for Bridge Deck Patching", 701.13 "Early Strength Type III Concrete for Bridge Deck Patching" & 701.14 "Rapid-Setting Latex-Modified Concrete for Bridge Deck Patching", Oklahoma Department of Transportation, *2009 Standard Specifications for Highway Construction.* Edited by the Specification Section 700 Committee, November 2009

4. Watson, D. & Ramseyer, C., *Section D 6.3.2 Alternate Lateral and Stability Bracing for Purlin Roof Systems,* AISI Standard, North American Specification for the Design of Cold-Formed Steel Structural Members, 2007 Edition.

International Presentations (Presenting Author is **Bold)**

1. Bescher, E., Kim, J., Ramseyer, C. and Vallens, J.K., "Low Carbon Footprint Pavement: History of Use, Performance and New Opportunities for Calcium Sulfoaluminate Pavement" 13th International Symposium on Concrete Roads, Berlin, Germany June 2018

2. **Ramseyer, C., "**Improving Continuous Reinforced Concrete Pavement – Building for the next century**",** *Grupo Cementos de Chihuahua, S.A.B. de C.V. Summit*, Chihuahua, Mexico, January 2017

3. **Ramseyer, C., "**Field Testing using Vibrating Wire Strain Gauges – A new look at an old problem**",** *Grupo Cementos de Chihuahua, S.A.B. de C.V. Summit*, Chihuahua, Mexico, January 2017

4. **Kang, T.H.-K.**, Biggs, K., and Ramseyer, C., "Buckling Modes of Cold-Formed Steel Columns," Proceedings, The 2nd International Conference on Civil Engineering and Materials, Hong Kong, July 2013.

5. **Bescher, E.,** Stremfel, J, Ramseyer, C. and Rice, E.K.,"The role of calcium sulfoaluminate in concrete sustainability", *Twelfth International Conference on Recent Advances in Concrete Technology and Sustainability Issues*, Prague, Czech Republic, Oct. 2012

6. **Kang, T.H.-K.,** Piyawat, K., and Ramseyer, C., "Design Buckling Strength Curve for Built-Up Cold-Formed Sections," *The 6th International Symposium on Steel Structures*, The Korean Society of Steel Construction and the International Journal of Steel Structures, Seoul, Korea, Nov. 2011

7. Holliday, L., **Ramseyer, C.C.** & Grant, H., "Masonry Block Construction in Haiti", *Wessex Institute of Technology, 8th International Conference on Earthquake Resistant Engineering Structures*, Chianciano Terme, Italy, September 2011.

8. Piyawat, K., Kim, W., Ramseyer, C. and **Kang, T.H.**, "ANSYS & OpenSees Modeling of Pre-Tensioned Prestressed Concrete Beams," *The 2011 International Conference on Computational Technologies in Concrete Structures*, Korea Advanced Institute of Science and Technology, Seoul, Korea, Sept. 2011.

National Presentations (Presenting Author is **Bold)**

1. **Giammanco, T.M.,** and **Ramseyer, C., "**The Tie That Binds: Strengthen Your Home Against Strong Winds**",** *Insurance Institute for Business & Home Safety, National Tornado Summit*, Oklahoma City, Oklahoma, Feb 2018

2. **Ramseyer, C.,** "High Wind / Wall Bracing", *APA Summit*, Grapevine, Texas, May 2016

3. **Ramseyer, C., "**Type K Engineered Expansive Cements**",** *Illinois Transportation and Highway Engineering (T.H.E.) Conference*, University of Illinois at Urbana Champaign, Illinois, Feb. 2017

4. **Ramseyer, C., "**Building Stronger Safer Homes – How Moore did it**",** *The Need for Stronger, Safer Buildings in the Heartland*, Edmond, Oklahoma, Aug 2016

5. **Ramseyer, C., "**Tornado Resistent (Residential) Construction Webinar**",** *APA- Webinar*, Norman, Oklahoma, July 2016

6. **Ramseyer, C., "**Tear Down or Repair**",** *Insurance Institute for Business & Home Safety, National Tornado Summit*, Oklahoma City, Oklahoma, March 2016

7. **Ramseyer, C., "**Setting the Standard – New Building Codes for Tornado Resistance**",** *Insurance Institute for Business & Home Safety, National Tornado Summit*, Oklahoma City, Oklahoma, March 2016

8. **Floyd, R.** and Ramseyer, C., "Behavior of Precast, Prestressed Calcium SulfoAluminate Cement Concrete Beams", 2016 PCI Convention and National Bridge Conference, Nashville Tennessee, March 2016

9. **Ramseyer, C., "**An Assessment of School and Commercial Facility Performance Due to the May 20th 2013, Moore, Oklahoma Tornado**",** *Insurance Institute for Business & Home Safety, National Tornado Summit*, Oklahoma City, Oklahoma, February 2015

10. **Ramseyer, C., "**The Development of the City of Moore – New Building Code for Tornado Resistance**",** *Insurance Institute for Business & Home Safety, National Tornado Summit*, Oklahoma City, Oklahoma, February 2015

11. **Ramseyer, C.,** "Forensic Evaluation of Tornado Damaged Structures at Moore, Oklahoma", *ASCE Structural Engineering Conference*, Ames, Iowa, November 2014

12. **Floyd, R.,** Ramseyer, C., "Behavior of Precast, Prestressed Calcium Sulfoaluminate Cement Concrete Beams", *American Concrete Institute, Annual Fall Convention, Research In Progress Technical Session*, Washington D.C., October 2014

13. **Ramseyer, C.,** "Influence of Lateral Load Bracing Systems on Damage and Survivability of Residential Structures Impacted by the Moore Oklahoma Tornado of May 20th, 2013", ASCE-SEI Structures Congress, Boston Massachusetts, April 2014

14. **Ramseyer, C.,** "Knowing Your Audience - Adjusting your Presentation on the Fly, ", *American Concrete Institute, Annual Spring Convention,* S802 Speakers Development Breakfast, Reno, Nevada, March 2014

15. **Ramseyer, C.,** "Rockford Airport – Shrinkage Compensated Concrete Taxi runway", *American Concrete Institute, Annual Spring Convention,* 223 committee meeting, Reno, Nevada, March 2014

16. **Ramseyer, C.,** "Performance of Shrinkage Compensating Concrete Slabs on Ground with Varying Reinforcement Ratio's", *American Concrete Institute, Annual Fall Convention,* 223 committee meeting, Phoenix, Arizona, October 2013

17. **Butko, D.**, Holliday, L., Reyes, M., Ramseyer, C. & Hatami, K., "Returning to Earth: analyzing and designing earthen structures for sustainable design", *ACSA (Association of Collegiate Schools of Architecture) Fall Conference*, Fort Lauderdale, Florida, October 2013.

18. **Holliday, L.,** Ramseyer, C. & Frame, M., "Shear Strength of Compressed Earth Block Walls", *Earth USA 2013 Biannual Conference*, Santa Fe, New Mexico, October 2013.

19. **Ramseyer, C.C.,** "Unrestrained and Restrained VWSG Shrinkage-Expansion Testing", *ASTM C09.68 Concrete Volume Change*, Indianapolis, Indiana , June 2013

20. **Roswurm, S.,** and Ramseyer, C. "Behavior of Type K Shrinkage-Compensating Concrete under Various Forms of Mechanical Restraint", *American Concrete Institute, Annual Fall Convention, Shrinakge-Compensating Concrete Technical Session*, Toronto, Canada, October 2012

21. **Shadravan, S.,** and Ramseyer, C. "Dimensional Stability of Type K Concrete Slabs-on-Ground", *American Concrete Institute, Annual Fall Convention, Shrinkage-Compensating Concrete Technical Session*, Toronto, Canada, October 2012

22. **Ramseyer, C.,** and Renevier, K. "The Use of Type K Shrinkage Compensating Concrete (SCC) in an Underground Water Tank", *American Concrete Institute, Annual Fall Convention, Shrinkage-Compensating Concrete Technical Session*, Toronto, Canada, October 2012

23. **Ramseyer, C.,** McLean, E., and Renevier, K. "Structural Stability of Shrinkage Compensating Concrete in a 6 Million Gallon Water Tank", *American Concrete Institute, Annual Spring Convention,* 223 committee meeting, Dallas, Texas, March 2012

24. **Ramseyer, C.,** McLean, E., Renevier, K. and Rinde, B. "Shrinkage Compensating Concrete for Water Tanks", *American Concrete Institute, Annual Fall Convention,* 223 committee meeting, Cincinnati, Ohio, October 2011

25. **Kang, T.H.-K.**, and Ramseyer, C, "Flexural Behavior of Circular Concrete-Filled Tubes with and without End Caps," Presentation, ACI Committee 335, Composite and Hybrid Structures, ACI Spring 2011 Convention, Tampa, FL, Apr. 2011

26. **Ramseyer, C.,** McLean, E., Davis, C., Gummersheimer B., Trautman, B., Martens, P., Amos, D., Schmidt, I., Diaz, L. and Sharp, R., "Experience with Rapid Setting, Low Permeability Bridge Overlays in the St. Louis Area" TRB, January 2011.

27. **Ramseyer, C.C.,** Kang, T. & Probst, A., "Precast Concrete-Filled Tube Beams for Sustainable Construction", *American Concrete Institute, Annual Fall Convention*, Pittsburgh, Pennsylvania, October 2010

28. **Ramseyer, C.C.,** "Investigation of the Dimensional Stability of Concrete Slabs on Grade at the Advanced Concrete Research Laboratory", *American Concrete Institute, Annual Fall Convention*, New Orleans, Louisiana, November 2009

29. **Ramseyer, C.C.,** "CTS – Dimensional Stability of Concrete Slabs on Grade", *American Concrete Institute, Annual Fall Convention*, New Orleans, Louisiana, November 2009

30. **Ramseyer, C.C.,** Piyawat, K., "Numerical Buckling Analysis of Built-Up, Cold Formed Members", *American Iron and Steel Institute, Committee on Specification,* Charlotte, North Carolina, August 2009

31. **Ramseyer, C.C.** and Perez, V., "Highway Panel Replacement – CSA Concrete in California", *Concrete Pavement Technology Program, Federal Highway Administration*, National Conference on Preservation, Repair and Rehabilitation of Concrete Pavements, St Louis, Missouri April 2009

32. **Ramseyer, C.C.,** "Research of shrinkage compensating cements at the University of Oklahoma", *American Concrete Institute, Annual Fall Convention*, St. Louis, Missouri, November 2008

33. **Ramseyer, C.C.,** "Camp Concrete – Growth of a Graduate Program" *American Society for Engineering Education*, Annual Conference and Exposition, Pittsburgh, Pennsylvania June 2008

34. **Ramseyer, C.C.,** "Research at the University of Oklahoma on CSA Concrete", *American Concrete Institute, Annual Spring Convention*, Los Angeles, California, March 2008

35. Ramseyer, C.C., "The Tulsa Experience with Concrete Overlays", *World of Concrete Technology for Construction*, CTS Mobile Mixer and Accelerated Concrete session, Los Vegas, Nevada, January 2008

36. **Ramseyer, C.C.** and Chancellor, B., "Economical Rehabilitation of Concrete Pavements", *Concrete Pavement Technology Program, Federal Highway Administration*, International Conference on Optimizing Paving Concrete Mixtures and Accelerated Concrete Pavement Construction and Rehabilitation, Atlanta, Georgia November 2007

37. **Ramseyer, C.C.,** "An Experiment in Undergraduate Research" *American Society for Engineering Education*, Annual Conference and Exposition, Honolulu, Hawaii June 2007

38. **Carmen Diaz** & Ramseyer, C.C., "Dynamic Testing of Rammed Earth Scale Models", *The Adobe Association of the SouthWest*, AdobeUSA BiAnnual Conference, El Rito New Mexico, May 2007

39. Shadravan, S., **Ramseyer, C.C.**, "Bending Capacity of Cold Formed Steel Purlins with Torsional Bracing Using The Base Test Method ", *Annual Stability Conference, Structural Stability Research Council*, New Orleans, Louisiana, April 2007.

40. **Ramseyer, C.C.,** Kiamanish, R., "Mechanically Activated Fly Ash in Fresh and Hardened Concrete" *American Concrete Institute, Annual Fall Convention*, Denver, Colorado, November 2006

41. **Ramseyer, C.C., Freyne, S.,** Peters, W. Geibler, J., "First HPC Bridge Deck in Oklahoma" *American Concrete Institute, Annual Fall Convention*, Kansas City, Kansas, November 2005

42. **Ramseyer, C.C.**, and Brueggen, B. L., "Camp Concrete – An Experiment in Undergraduate Research" *American Society for Engineering Education*, Annual Meeting of the Midwest Section, Fayetteville, Arkansas, September 2005

43. **Ramseyer, C.C.**, "A Study of Shrinkage in Concrete from the Time of Casting" *American Concrete Institute, Annual Spring Convention*, New York, New York, April 2005

44. **Brueggen, B.L.** and Ramseyer, C.C., "Mechanical Activation of Fly Ash: Why it Works"' *American Concrete Institute, Annual Spring Convention*, New York, New York, April 2005

45. **Chancellor, B.** and Ramseyer, C.C., "Investigation of Very Early Strength Concrete with Low Shrinkage Properties Suitable for Rigid Pavement Repair" *American Concrete Institute, Annual Spring Convention*, New York, New York, April 2005

46. **Brueggen, B.L.** and Ramseyer, C.C., "Finite Element Modeling of Cold-Formed Steel Joist Systems", *Structural Stability Research Council - Stability Conference* at the *North American Steel Construction Conference*, Montreal, Quebec, Canada, April 2005.

47. **Thottunkal, V.J.** and Ramseyer, C.C., "Axial Capacity of Deep Z Sections", *Structural Stability Research Council - Stability Conference* at the *North American Steel Construction Conference*, Montreal, Quebec, Canada, April 2005.

48. Brueggen, B.L. and **Ramseyer, C.C.**, "Capacity of Built-Up, Cold-Formed Steel Axial Compression Members", *Structural Stability Research Council - Stability Conference* at the *North American Steel Construction Conference*, Montreal, Quebec, Canada, April 2005.

49. **Ramseyer, C.C., Freyne, S.,** Russell, B.W., and Bush, T., "Enhancing Compressive Strength in HPC with a Corrosion Inhibiting Admixture Containing Calcium Nitrite", *American Concrete Institute, Annual Fall Convention*, Dallas Texas, October 2001

50. **Russell, B.W.**, and Ramseyer, C.C., "High Performance Concrete Products and Procedures for Repairing Bridge Decks and Rigid Pavements", *78th Annual Transportation Research Board Meeting,* Washington D.C., January, 1999

51. **Ramseyer, C.C.,** and Russell, B.W., "High Performance Concrete Products and Procedures for Repairing Bridge Decks and Rigid Pavements", *Pre-Stressed Post-tensioned Concrete Institute, Annual Convention,* Atlanta Georgia, November 1998

Invited Presentations (Presenting Author is **Bold**)

1. **Ramseyer, C.C.,** " Oklahoma's Earthquakes – A Structural Engineer's Perspective", *Oklahoma Better Building Summit, Oklahoma State Home Builders Association*, Oklahoma City, Oklahoma, September 2015

2. **Ramseyer, C.C.,** "High Winds, Lateral Bracing", *Oklahoma Better Building Summit, Oklahoma State Home Builders Association*, Oklahoma City, Oklahoma, September 2015

3. **Ramseyer, C.,** **"**Oklahoma's Earthquakes – A Structural Engineer's Perspective**",** *What's Shaking Oklahoma? Oklahoma Commercial Real Estate Forum™: Earthquakes, Central Oklahoma Commercial Association of REALTORS® (COCAR™),* Oklahoma City, Oklahoma, Sept 2016

4. **Ramseyer, C.,** **"**Setting the Standard – New Building Codes for Tornado Resistance**",** *North Texas Chapter of the International Code Council (ICC)* Grapevine, Texas, April 2016

5. **Ramseyer, C.,** **"**B-CSA Pavement Research**",** *University of Texas – Austin, CRCP FAST Act* Austin, Texas, March 2016

6. **Ramseyer, C.C.,** "The Development of the City of Moore – New Building Code for Tornado Resistance", *Oklahoma Better Building Summit, Oklahoma State Home Builders Association*, Oklahoma City, Oklahoma, September 2015

7. **Ramseyer, C.,** **"**An Assessment of School and Commercial Facility Performance Due to the May 20th 2013, Moore, Oklahoma Tornado**",** *Board of Architects*, Metro Tech/Spring Lake, Oklahoma City, Oklahoma, April 2015

8. **Ramseyer, C.C.,** "The Development of the City of Moore – New Building Code for Tornado Resistance", *Board of Architects*, Metro Tech/Spring Lake, Oklahoma City, Oklahoma, April 2015

9. **Ramseyer, C.C.,**"The Use of Shrinkage Compensating Concrete in an Underground Water Tank", *ACI-Oklahoma Chapter Meeting*, Oklahoma City, Oklahoma, November 2014

10. **Ramseyer, C.C.,** Fagan, J., Dyer, J., "Dialog with Galileo: A Learning Community for Engineering at OU Arezzo", *Teaching Scholars Initiative*, Norman, Oklahoma, October 2014

11. **Ramseyer, C.,** "Tornadoes – Is Community Resiliency Possible?", *Oklahoma Building Inspectors Association – Annual Conference,* Ada, Oklahoma, October 2014

12. **Ramseyer, C.,** "Considering the 2009 International Residential Code?", *Oklahoma Building Inspectors Association – Annual Conference,* Ada, Oklahoma, October 2014

13. **Ramseyer, C.,** Holliday, L., Floyd, R., "Tornadoes – Taking Shelter" subtitled "Is Community Resiliency Possible?", *Oklahoma Chapter of the American Planning Association – Annual Conference,* Norman, Oklahoma, October 2014

14. **Ramseyer, C.,** "New Building Code for Tornado Resistance", Southwest *Construction Codes Council,* Del City, Oklahoma, September 2014

15. **Ramseyer, C.,** "Residential Foundation Design for Central Oklahoma", Southwest *Construction Codes Council,* Del City, Oklahoma, September 2014

16. **Ramseyer, C.C.,** "High Wind Construction - Lateral Load Resistant Design for High Wind Events", *Oklahoma Better Building Summit, Oklahoma State Home Builders Association*, Mid-West City, Oklahoma, September 2014

17. **Ramseyer, C.C.,** "Residential Foundation Design for Central Oklahoma", *Oklahoma Better Building Summit, Oklahoma State Home Builders Association*, Mid-West City, Oklahoma, September 2014

18. **Ramseyer, C.,** "New Building Code for Tornado Resistance", Oklahoma City Engineering Club Meeting, Purcell, Oklahoma, May 2014

19. **Ramseyer, C., Bescher, E.,** "100 Year Pavement", Federal Aviation Administration Headquarters, Washington D.C., May 2014

20. **Ramseyer, C.,** "New Building Code for Tornado Resistance", Association of Central Oklahoma Governments Meeting for City Managers, Oklahoma City, Oklahoma, May 2014

21. **Ramseyer, C.,** "Tornado Research", 2014 Mid-Continent Student Conference, Banquet Dinner – Keynote Presentation, Stillwater, Oklahoma, April 2014

22. **Ramseyer, C.,** "New Building Code for Tornado Resistance", Association of Central Oklahoma Governments Meeting for City Planners, Oklahoma City, Oklahoma, April 2014

23. **Ramseyer, C.,** "New Building Code for Tornado Resistance", Purcell Rotary Club Meeting, Purcell, Oklahoma, April 2014

24. **Ramseyer, C.,** "New Building Code for Tornado Resistance", Enid Homebuilders Meeting, Oklahoma City, Oklahoma, April 2014

25. **Ramseyer, C.,** "City of Moore – New Building Code for Tornado Resistance Adoption", City of Moore Council Meeting, Moore, Oklahoma, March 17 2014

26. **Ramseyer, C.,** "New Building Code for Tornado Resistance", Central Oklahoma Habitat for Humanity Meeting, Oklahoma City, Oklahoma, March 2014

27. **Ramseyer, C.,** "City of Moore – New Building Code for Tornado Resistance", City of Moore Council Meeting, Moore, Oklahoma, February 2014

28. **Ramseyer, C.,** "Lessons Learned from the May 20th Tornado", ASCE-*Oklahoma City Chapter Meeting*, Oklahoma City, Oklahoma, February 2014

29. **Ramseyer, C.,** "City of Moore – New Building Code for Tornado Resistance", Moore Home Builders Meeting at City Hall , Moore, Oklahoma, January 2014

30. **Ramseyer, C.,** "City of Moore – New Building Code for Tornado Resistance", City of Moore Meeting at City Hall , Moore, Oklahoma, December 2013

31. **Ramseyer, C.,** "Lessons Learned from the May 20th Tornado", Moore Home Builders Association, Moore, Oklahoma, November 2013

32. **Ramseyer, C.C., Butzer, H., and Fitzsimmons, K.,** "Bridge to Design Thinking", *2013 Building Bridges, State of Creativity Forum*, Oklahoma City, Oklahoma, November 2013

33. **Ramseyer, C.,** "Lessons Learned from the May 20th Tornado", Builders Association of South Central Oklahoma, Norman, Oklahoma, November 2013

34. **Ramseyer, C.,** "Opening Session: Moore Tornado – May 20th, "Before the storm and after", *10th* Annual Oklahoma Homebuyer Education Association Conference, Edmond, Oklahoma, November 2013

35. **Ramseyer, C.C., Butzer, H., and Fitzsimmons, K.,** "SkyDance Bridge ", *Transformations – 2013 AIA Central States Region and AIA Oklahoma Convention, Trade Show and Design Awards*, Oklahoma City, Oklahoma , October 2013

36. **Ramseyer, C.,** "Lessons Learned from the May 20th Tornado", State of Oklahoma, House of Representatives Interim Study **13-016,** Economic Development, Chairman Rep. Randy McDaniel, HOST: Rep. Richard Morrissette, District 92, Oklahoma City, Oklahoma, September 26th 2013

37. **Ramseyer, C.C.,** "Structural Framing, Walls", *Oklahoma Better Building Summit, Oklahoma State Home Builders Association*, Mid-West City, Oklahoma, September 2013

38. **Ramseyer, C.C.,** "Structural Framing, Roofs", *Oklahoma Better Building Summit, Oklahoma State Home Builders Association*, Mid-West City, Oklahoma, September 2013

39. **Ramseyer, C.C.,** "Foundations, Soils and Concrete", *Oklahoma Better Building Summit, Oklahoma State Home Builders Association*, Mid-West City, Oklahoma, September 2013

40. **Ramseyer, C.C.,**"Rapid Setting Concrete – 2 hours from casting to stripping", *ACI-Oklahoma Chapter Meeting*, Oklahoma City, Oklahoma, September 2013

41. **Ramseyer, C.,** "Moore Tornado – May 20th, NSF & ASCE/SEI Evaluations" , *Montenaro Lunch and Learn*, Moore, Oklahoma, August 2013

42. **Ramseyer, C.,** "Moore Tornado – May 20th, NSF & ASCE/SEI Evaluations" , *ASCE-Oklahoma City Chapter Meeting*, Oklahoma City, Oklahoma, August 2013

43. **Ramseyer, C.C.,** "Flange Connection to Gussett Plate – The Intel Problem", *W&W Steel corp*, Oklahoma City, Oklahoma, May 2013

44. **Ramseyer, C.C.,** " Rapid Setting Concrete, Cement Types and Performance Characteristics used by CalTrans", *Caltrans - District 7*, Los Angeles, California, April 2013

45. **Ramseyer, C.C.,** "Investigation of Very Early Strength Concrete with Low Shrinkage Properties", *ACI-Oklahoma Chapter Meeting*, Oklahoma City, Oklahoma, April 2013

46. **Ramseyer, C.C.,** "Field Testing of Low Shrinkage Concrete in a Six Million Gallon Water Tank", *Oklahoma Structural Engineer's Association –central chapter meeting*, Oklahoma City, Oklahoma, February 2013

47. **Ramseyer, C.C.,** "Shrinkage Compensating Concrete for Crack Free Bridge Decks", *ODOT-Headquarters*, Oklahoma City, Oklahoma, February 2013

48. **Ramseyer, C.C.,** " Preservation, Repair and Rehabilitation of Concrete Pavements – Dimensional Stability of Concrete Slabs on Ground", *Caltrans - District 7*, Los Angeles, California, January 2013

49. **Ramseyer, C.C.,** "Preservation, Repair and Rehabilitation of Concrete Pavements - Bridges Without Cracks", *Caltrans - HQ.* Sacramento, California, January 2013

50. **Ramseyer, C.C.,** "Preservation, Repair and Rehabilitation of Concrete Pavements – Dimensional Stability of Concrete Slabs on Ground", *Caltrans - HQ.* Sacramento, California , January 2013

51. **Ramseyer, C.C.,** "600 Bridges Without Cracks", *Wiss Janney Elstner Associates Inc.*, Austin, Texas, January 2013

52. **Ramseyer, C.C.,** "Unrestrained and Restrained VWSG Shrinkage-Expansion Testing", *CTS Cement Manufacturing Inc.*, Los Angeles, California, December 2012

53. **Ramseyer, C.C.,** "Structural Engineering at OU", *Structural Engineer Council of Oklahoma*, Oklahoma City, Oklahoma, November 2012

54. Ramseyer, C.C., Butzer, H., "The Oklahoma City SkyDance Bridge: The Collaborative Process", A pecha kucha format Creativity Slam, State of Creativity Forum, Oklahoma City, Oklahoma, November 2012

55. **Ramseyer, C.C.,** McLean, E., Rubin, E., "600 Bridges Without Cracks", *ACI-Oklahoma Chapter Meeting*, Oklahoma City, Oklahoma, November 2012

56. **Ramseyer, C.C.,** "Wall Bracing – What does the IRC 2009 Require?", *Oklahoma State Home Builders Association*, Oklahoma City, Oklahoma , October 2012

57. **Muraleetharan, K. K.,** Bright, Z., Miller, G., Breazile, C., Ramseyer, C., Kirupakaran, K., "Understanding Distress to Bridges Caused from Interaction with Adjacent Roadways through Instrumentation", *2012 ODOT-OkTC Transportation Research Day*, Mid-West City, Oklahoma, October 2012

58. **Ramseyer, C.C., Phillips, J., Ramming, C.,** "State of Our Schools", *Oklahoma Structural Engineer's Association –central chapter meeting*, Oklahoma City, Oklahoma, June 2012

59. Ramseyer, C.C., **Carroll, S., Butzer, H.,** Massenat, L., Fitzsimmons, K., Wanzer, D., Gardner, J., Johnson, B., "SkyDance Bridge – A Designers Point of View", *Oklahoma Structural Engineer's Association –central chapter meeting*, Oklahoma City, Oklahoma, May 2012

60. **Ramseyer, C.C.,** Carroll, S., Butzer, H., Massenat, L., Fitzsimmons, K., Wanzer, D., Gardner, J., Johnson, B., "SkyDance Pedestrian Bridge over I-40 in Oklahoma City", *Oklahoma Structural Engineer's Association – Spring Conference 2012*, Stillwater, Oklahoma ,A pril 2012

61. **Ramseyer, C.C.,** "Considering the 2009 International Residential Code", *Adoption of the 2009 edition of the International Residential Code Meeting- Building Inspection 8th floor, 420 W. Main*, Oklahoma City, Oklahoma, March 2012

62. **Carroll, S.,** Butzer, H., Ramseyer, C.C., Massenat, L., Fitzsimmons, K., Wanzer, D., Gardner, J., Johnson, B.,"The Oklahoma City SkyDance Bridge: The evolution of an idea through a design collaboration.", *OSU School of Architecture*, Stillwater, Oklahoma, March 2012

63. **Ramseyer, C.C.,** "Considering the 2009 International Residential Code", *Adoption of the 2009 edition of the International Residential Code Meeting- City Hall*, Norman, Oklahoma, January 2012

64. **Mekker, M.,** Ramseyer, C.C., Brewer, W., "Overview of Transportation Issues at Fears Lab", *Oklahoma Transportation Center – Summer Symposium*, Midwest City, Oklahoma, July 2011

65. **Shadravan, S.,** Ramseyer, C.C., "Dimensional Stability of Slabs on Grade", *Oklahoma Transportation Center – Summer Symposium*, Midwest City, Oklahoma, July 2011

66. **Ramseyer, C.C.,** "SkyDance – Evolution of a Bridge Design", *ODOT-Headquarters*, Meeting Including ODOT, City of OKC, FHWA and independent Engineering Firms, Oklahoma City, Oklahoma, May 2011

67. **Ramseyer, C.,** McLean, E., Davis, C., Gummersheimer B., Trautman, B., Martens, P., Amos, D., Schmidt, I., Diaz, L. and Sharp, R., "Experience with Rapid Setting, Low Permeability Bridge Overlays in the St. Louis Area" , *ASCE-Oklahoma City Chapter Meeting*, Oklahoma City, Oklahoma, March 2011

68. **Ramseyer, C.C.,** "Recommendations of the International Residential Code Building Subcommittee", *Oklahoma Uniform Building Code Commission Meeting*, Oklahoma City, Oklahoma, November 2010

69. **Ramseyer, C.C.,** "Experience with 4 Bridges in the St. Louis Area", *ASCE-Oklahoma City Chapter Meeting*, Oklahoma City, Oklahoma, October 2010

70. **Ramseyer, C.C.,** "Evaluation of the Effectiveness of ODOT's Cable Barrier Program", *OTC Transportation Research Day, Annual Fall Meeting*, Oklahoma City, Oklahoma, October 2010

71. **Ramseyer, C.C.,** "Transportation at Fears Lab", *OTC Transportation Research Day, Annual Fall Meeting*, Oklahoma City, Oklahoma, October 2010

72. **Ramseyer, C.C.,** "Low-P Overlay Bridge Decks, 12th Street, Russell & Gravoix, Lafayette and Pestalosi", *Evaluation Meeting with MoDOT*, St. Louis, Missouri, September 2010

73. **Ramseyer, C.C.,** "Overview of Transportation Issues at Fears Lab", *Oklahoma Transportation Center – Summer Symposium*, Midwest City, Oklahoma, July 2010

74. Ramseyer, C.C., **Shadravan, S.,** "Dimensional Stability of Concrete Slabs on Grade", *ACI-Oklahoma Chapter Meeting*, Oklahoma City, Oklahoma, May 2010

75. **Ramseyer, C.C.,** "Transportation at Fears Lab", *OTC-Oklahoma Transportation Center, Meeting with RITA*, Norman, Oklahoma, March 2010

76. **Ramseyer, C.C.,** "Extreme Concrete – Cold Weather Concrete on a Rapid Build Construction Site", *ACI-Oklahoma Chapter Meeting*, Oklahoma City, Oklahoma, February 2010

77. **Ramseyer, C.,** "SkyDance – Evolution of a Bridge Design", American Society of Civil Engineers, ASCE, Oklahoma Section Annual Conference, Advanced Technology Research Center, Oklahoma State University, Stillwater August 28th 2009

78. Butzer, H. and **Ramseyer, C.,** "SkyDance – The Creation and Evolution of the Bridge", Meachum Hall, Construction Science Speakers Program, University of Oklahoma, Norman April 14th 2009

79. **Ramseyer, C.C.,** "The Relevance of OU's Fears Lab to the Local Structural Engineering Community" Oklahoma Structural Engineering Association *(OSEA) - Oklahoma Central Chapter Meeting*, Oklahoma City, Oklahoma, February 2009

80. **Ramseyer, C.C.**, "Pozzolan Concrete Research at The University of Oklahoma Fears Lab", *ACI-Oklahoma Chapter Meeting*, Oklahoma City, Oklahoma, December 2008

81. **Ramseyer, C.C.**, "High Performance Concrete in Oklahoma", *ODOT/OTC Research Day*, Oklahoma City, Oklahoma, October 2008

82. **Ramseyer, C.C.**, "Fears Lab and its Impact on Engineering Education", *ASCE-Oklahoma City Chapter Meeting*, Oklahoma City, Oklahoma, October 2008

83. **Ramseyer, C.C.**, "Concrete Chemistry and Materials Research at Fears Lab", *Dolese Seminar*, Oklahoma City, Oklahoma, October 2008

84. **Campbell, M.,** Ramseyer, C.C., "Introduction to Fears Lab and Student Activities", *ACI-Tulsa Chapter Meeting*, Tulsa, Oklahoma, September 2008

85. **Ramseyer, C.C.**, "Fast Track Materials", *ACPA-Oklahoma/Arkansas Chapter – 2008 Oklahoma Portland Cement Concrete Pavement Conference*, Oklahoma City, Oklahoma, March 2008

86. **Ramseyer, C.C.**, "The Tulsa Experience with Concrete Overlays", *ACI-Oklahoma Chapter Meeting*, Oklahoma City, Oklahoma, February 2008

87. **Ramseyer, C.C.,** "Experiences with Bridge Construction - Oklahoma", *Pooled-Fund Seminar: Construction of Crack-Free Bridge Decks*, Oklahoma City, Oklahoma, October 2007

88. **Ramseyer, C.C.,** "Pier and Grade Beam Foundations" *Oklahoma Board of Registration*, Open forum meeting, Oklahoma City, Oklahoma July 2007

89. **Ramseyer, C.C.,** " Stability Bracing Requirements for Metal Building Frame Systems", *Metal Building Manufacturers Association, MBMA Annual Researcher Symposium*, Tampa, Florida, February 2007

90. **Ramseyer, C.C.,** " Bridge Deck Repairs and The Tulsa Experience with Pavement Overlays", *GCC Seminar on Added Value Products Rapid Set, CTS Type K Shrinkage Compensating Cement, Microsilex, Versabind* , Mid-Continent Ready Mix Offices, Tulsa, Oklahoma, January 2007

91. **Ramseyer, C.C.,** and Kiamanish, R., "Improved Blended Cement with Large Fly Ash Replacement", *Quality Action Seminar*, LaFarge Cement Co. Tulsa, Oklahoma, September 2006

92. Ramseyer, C.C., Freyne, S. and **Giebler, J.,** "High Performance Concrete for use in Oklahoma Bridge Decks", *30th Annual Transportation Research Day*, Oklahoma Department of Transportation, Oklahoma City, Oklahoma, September 2006

93. **Ramseyer, C.C.,** "Experiences with Bridge Construction - Oklahoma", *4th Annual Meeting for the Pooled-Fund Study: Construction of Crack-Free Bridge Decks*, Kansas City, Missouri, July 2006

94. **Ramseyer, C.C.,** "Steel Design in the Metal Building Industry" Star Building Systems, Oklahoma City, Oklahoma, February 2006

95. **Russell, B.W., and Ramseyer, C.C.,** "This is Not Your Father's Concrete or Understanding Concrete Science Leads to Performance", Session - High Performance Concrete and Research

into Very Early Strength Production, *Shaping the Future of Concrete - GRACE Quality Control Seminar,* GRACE Construction Products, Cambridge, Massachusetts, November 12, 1998

INTELLECTUAL PROPERTY DEVELOPMENT

Liangzhong Xiang, Shanshan Tang, Christopher Ramseyer, "Method and system of X-ray-induced Acoustic Computed Tomography of Concrete Infrastructure," US Patent Application (Pending), ID Number: 16NOR045, Disclosed: May 2016

SUPERVISION OF STUDENTS

Summary: *I have advised a total of 39 graduate students and graduated 2 Ph.D. students (1 woman (1 minority)/1 man (1 minority)), 32 M.S. students with thesis (5 women (2 minority)/27 men (7 minority)) and 6 M.S. students without thesis (0 women (0 minority)/6 men (4 minority)) . I have also directed the work of 84 undergraduate students in my "Camp Concrete" program (19 women (12 minority)/65 men (7 minority)) and 14 undergraduate students in the NSF-REU program (2 women (0 minority)/12 men (2 minority)) on undergraduate research projects. I currently have 3 master's student advisees in progress. My students have won $294,500 in awards while members of my research program.*

Ph.D. Degree

2011 Shideh Shadravan, "Dimensional Stability of Concrete Slabs on Grade"

2011 Krisda Piyawat, "A Suggested Design Approach for Built-up Cold-Formed Columns based on Research Using NonLinear Finite Element Method"

Master of Science Degree – with Thesis

2017 Erik Reyes (Expected Summer 2017) "In-Situ testing of Shrinkage Compensated Concrete in Slabs on Ground and Bridge Decks"

2016 Sam Sherry, "Assessment of Partial Joint Penetration Welds on Bolted End-plate Connections for Use in Intermediate Moment Frames"

2014 Jacquie Baker, "How Varying Amounts of Fly Ash Effect Shrinkage in Calcium SulfoAluminate Cement Concrete"

2013 Jesse Roswurm, "Investigation Into the Influence of Sand Angularity on the Standard Test for Strand Bond"

2013 Seth Carlton, "Material Behavior of Latex-Modified Concrete in Thin Hyperbolic Paraboloid Shells"

2013 Seth Roswurm, "Investigation of the Mechanical Behavior of Type K Shrinkage Compensating Concrete Under Various Forms of Mechanical Restraint"

2012 Carlos Rincon, "The Shrinkage Behavior of Calcium SulphoAluminate Concrete and Portland Concrete at Early Age"

2012 Kyle Renevier, "Investigation of Shrinkage Compensating Concrete in an Underground Water Tank"

2011 Andy Nghiem, "Flexural Behavior of Circular Concrete Filled Steel Tubes without Axial Loads"M.S.

2011 Pat Crowder, "The Tension Strength of Latex Modified Bonded Concrete Overlays"

2011 David Frank, "The Effects of Temperature on Compressive Strength of Rapid Setting Concrete"

2010 Mark Emde, "Investigation of Torsional Bracing of Cold-Formed Steel Roofing Systems"

2010 Chris Davis, "Investigation of Early-Age Bonded Concrete Overlay Failure"

2009 Marty Farris, "Self Consolidating Concrete for Use in Reinforced Bridge Beams"

2009 Derick Thompson, "Shrinkage Effects in the Transfer Zone of Prestressed Concrete Beams"

2009 Andrew Scherman, "Investigation of Non Destructive Testing Techniques on Aged Concrete Structures"

2008 Aaron Probst, "Improved Composite Action Using Shear Connectors for Concrete Filled Steel Tubes in Flexure"

2008 Kenny Biggs, "Axial Load Capacity of Cold-Formed, Built-Up Members"

2008 Jared Schwennesen, "An Evaluation of a 23" Garage Door Return System with the Application of a Lateral Load"

2008 Keara Phillips, "Prevention of Corrosion in Reinforced Concrete Structures"

2007 Roozbeh Kiamanesh, "Mechanically Activated Flyash for Blended Cement"

2007 Brent Chancellor, "Very Early Strength Concrete for Patching"

2007 Shideh Shadravan, "Bending Capacity of Cold Formed Z-Purlins Supporting a Standing Seam Roof System with Torsional Bracing"

2007 Clay Buehrle, "Cold-Formed Zee Purlin Capacity Study with Interaction of Web Stiffeners"

2007 Jessica Whittle, "Buckling Capacities of Axially Loaded, Cold-Formed, Built-Up Members"

2007 Matt Gastgeb, "Very Early Strength Concrete for Patching"

2007 Cory Yeager, "Corrosion of Prestressing Strands Used to Construct Bridge Girders"

2006 Jason Giebler, "The Use of High Performance Concrete in Oklahoma Bridge Decks"

2006 Daniel Myers, "Fiber Reinforced Concrete and Bridge Deck Cracking"

2005 Jen-Teck Kao, "Investigation into the Use of Portland Cement Concrete with Fiber Additives for Bridge Decks in the State of Oklahoma"

2004 Beth Brueggen, "Strength and Serviceability Issues of Cold-Formed Steel Joists"

2004 Vinay Joseph Thottunkal, "Axial Load Capacity of Cold-Formed Z Sections"

Master of Science Degree – Non Thesis

2014 Gary Quinonez, - Non Thesis topic – "Beam Bracing for Deck Slab Placement"

2012 Travis Poole, - Non Thesis topic – "The Investigation of Porosity Measurement Methods and the Relationship to Cement Microstructure"

2012 Hai Wei Lim, – Non Thesis topic – "Flexural Strength of Concrete-Filled Steel Tubes Subjected to Pure Bending"

2012 Foroud Moradi Sarmeidani, – Non Thesis topic – "Evaluation of Designing a Building with Different Materials"

2010 Kyle Haskett, – Non Thesis topic – "The use of Steel to Reinforce Soil"

2009 Victor Njiru, – Non Thesis topic – "SkyDance Foundation"

Undergraduate Research Supervision –
"Camp Concrete" – Research Experience for Under Graduates

2017	Adam Aab		
2016	Jacob Roswurm	Steve Roswurm	Dakota Gennings
	Dare Obasade		
2015	Ofelia Olvera	Jacob Roswurm	Steve Roswurm
	Uriah Nichols	Raina Coleman	
2014	Ofelia Olvera	Jacob Roswurm	Steve Roswurm
	Erik Reyes	Ayanna Harris	Raina Coleman
2011	Charlie Mish	Jesse Roswurm	Seth Roswurm
	Jenny Bergen	Alyse Burgess	Tim Duncan
	Matt McSherry		
2010	Pat Crowder	Jesse Roswurm	Seth Roswurm
	David Frank	Cassie Gonzales	
2009	Chris Davis	Mark Emde	Pat Crowder
	David Frank		
2008	Kyle Haskett	Chris Hill	Chris Davis
	Michael Rice	Marissa Samaripa	
2007	David Swyden	Mark Williams	Kyle Haskett
	Marty Farris	Kenny Biggs	Jared Schwennesen
	Andrew Scherman	Michaela Campbell	Patrick Crowder
	Andrew Nghiem		
2006	Roozbeh Kiamanesh	Daniel Myers	David Swyden
	Marty Farris	Kenny Biggs	Shideh Shadravan
	Chris Ely	Chris Harlin	Hai Wei Lim
	Zach West	Brandon Birch	Geeta Ashabi
	Cortney Westphal	Jared Schwennesen	Russell Buhler
2005	Derek Thompson	Roozbeh Kiamanesh	Daniel Myers
	Jason Giebler	Jessica Whittle	Keara Phillips
	Kate Nelson	David Swyden	Matt Schachle
	Ali Farzaneh	Josh Malwick	Clay Buehrle
	Matt Gastgeb	Randy Martin	Kenny Biggs
	Chris Ely	Chris Harlin	Dustin Warden
	Ivy Lau	Nam Nguyen	
2004	Brent Chancellor	Roozbeh Kiamanesh	Daniel Myers
	Derick Thompson	Cory Yeager	Katie McDowell
	Regina Cantu	Derek McIntosh	B.J. Hawkins
	Jason Giebler		
2002	Beth Brueggen		

2003 Beth Brueggen

Undergraduate Research Supervision –
NSF – Research Experience for Under Graduates

2012 Tim Duncan(OU) , Anthony Hanley (OU) and Brittany Cranor (OU)

2011 Michelle Mekker (University @ Buffalo NY) and Bryan Rinde (CSU Sacramento)

2010 Edward Eskew (Clarkson) and Cameron DuBois (Linfield)

2009 Pat Crowder (OU)

2008 Chris Hill (OU) and Michael Rice (OU)

2007 Alex Jones (Olin) and Gregory Streibling (Missouri-Rolla)

2006 Marty Farris (OU) and Jarrod Persun (Clarkson)

Undergraduate Research Supervision –
Awards to students

2017 Airport Cooperative Research Program (ACRP) Graduate Researh Award to Steve Roswurm Value = $10,000

2012 Robberson Research and Creative Endeavors Grant awarded to Seth Carlton for travel and research at Cambridge, England. Value = $500

2007 Graduate Research Fellowship awarded to Jessica Whittle from the National Science Foundation (N.S.F.) Estimated Value = $151,500

2004 Graduate Research Fellowship awarded to Beth Brueggen from the National Science Foundation (N.S.F.) Estimated Value = $121,500

2004 Outstanding Graduate Assistant Award awarded to Beth Brueggen from the OU Graduate Student Senate. Value = $500

2003 O.H. Ammann Research Fellowship in Structural Engineering awarded to Beth Brueggen for the proposal "Continuation of Inelastic Finite Element Modeling of the Weld Connections and End Region of Cold Form Steel Joists." From the Structural Engineering Institute of ASCE. Value = $5,000

2002 O.H. Ammann Research Fellowship in Structural Engineering awarded to Beth Brueggen for the proposal "Inelastic Finite Element Modeling of the Weld Connections and End Region of Cold Form Steel Joists." From the Structural Engineering Institute of ASCE. Value = $5,000

2002 First Place, Technical Paper Competition, ASCE Mid-Continent Conference awarded to Beth Brueggen for the paper and presentation "Strength and serviceability issues of cold formed steel joists." Value = $500

TEACHING EXPERIENCE

Classroom Education

Courses Taught (27) Sections Taught (95)

CEES 1213 Computing Applications in CEES	Sp 04
CEES 2113 Statics	F 14, 15, 16, 17, 18
CEES 3403 Civil Engineering Materials	Sp 01, 02, 03, 04,10, 11
CEES 3414 Structural Analysis	F 01, 09, 10, 11
CEES 3453 Introduction to Construction Management	Sp 16, 17
CEES 3663 Structural Design – Steel I	F 00, 01, 02, 03, 04, 05, 07, 08 Sp 14, 15, 16, 17
CEES 3763 Structural Design – Concrete I	Sp 05, 06, 07
CEES 4050 Design Problems in Civil Engineering	F and Sp 00, 01, 02, 03
CEES 4803 Professional Practice – Pre Capstone	F 05, 06, 07, 08
CEES 4753 Structural Design – Wood	F 13
CEES 4774 Structural Design – Steel and Concrete	Sp 10, 11, 12, 13
CEES 4903 Civil Engineering Design – Capstone	Sp 06, 07, 08, 09, 13
CEES 4993 Architectural Engineering Design, Capstone	Sp 08, 09, 13
CEES 5010 Research Problems – Timber Design	Su 04
CEES 5010 Research Problems – Concrete Design	Sp 06
CEES 5020 Corrosion Issues with Bridges	F 04
CEES 5020 Bridge Deck Overlays	Sp 05
CEES 5020 Bridge Engineering	F 11
CEES 5020 Structural Design - Masonry	F 12
CEES 5673 Structural Design – Concrete II	F 05
CEES 5773 Structural Design – Steel II	Sp 01, 02, 03, 04, 05, 06, 08, 09 F 13 Sp 15 F 15, 16
ENGR 1420 Freshman Orientation	Sp 07, 08, 09
ENGR 2002 Professional Development	F 14, 15, 16, 17, 18
ENGR 3401 Engineering Economics	F 07, 08
ENGR 4510 Disruptive and Innovative Technology Ideation	F 15
ENGR 4510 Money and the Engineer	Su 06, 07 – Sp 08, 09 F 16
HON 3980 Honors Research	Sp 02, F 05, Sp 10, Sp 13, Su 13

Additional Educational Activities

Seminars and Programs Taught (29)

Participated in OU summer student programs for K-12 STEM development:

DEVAS (Discovering Engineering Via Adventures in Science) (2008, 2009, 2010, 2011, 2012, 2013)

BP Engineering Academy. (2008, 2009, 2010, 2011, 2012, 2013)

Passport to Engineering middle school camp (2011)

GLAMS (Girls Learning About Math and Science) (2011)

These are outreach programs for severely under represented youth in engineering. The teaching exercise consists of building structures that are then tested to failure on the shake table at the Donald G. Fears Structural Engineering Lab. This is followed by re-building the structures and re-testing. The rebuilt second structure ALWAYS exceeds the behavior of their first structure. A brief discussion follows on how engineers learn from failure.

Additional Educational Activities -Continued

Seminars and Programs Taught (29)

Organized and developed with Wilson Brewer from Langston University the following:

Langston 4-H Transportation Program	(2009 to 2015)
Upward Bound	(2011)
Project Promise	(2012)
National Summer Transportation Institute	(2012)

These are outreach program for severely under represented youth in engineering. This program introduces the students to the Donald G. Fears Structural Engineering Lab and transportation issues and challenges faced by Oklahoma. In 2011 these programs participated in the shake table program described above.

Participated OU summer teacher programs for K-12 STEM development:
Creating Critical Connections in Math and Science C3[M+S]
Immersing Middle School Teachers in Research Experiences in Math and Science

1. Program investigated the classical column buckling experiments by Euler and how to relate these engineering experiments to secondary school students. This program included a visit to the History of science collection which allowed the teachers to handle books published by Galileo and Euler, June 1st through 12th, 2009
2. Program investigated the use of simple analytical bridge modeling and statistics to a better understanding of engineering and science for secondary school students. June 6th through 17th, 2011, 2012, 2013 and 2014

Research Experience for Teachers (RET) Site: Strengthening a K12 Learning Community through Engineering Research. Sponsor: National Science Foundation. My group investigated the use of both simple analytical and physical bridge modeling, coupled with statistics to form a better understanding of engineering and science for High school teachers. June 13th through July 22nd, 2011, 2012 & 2013Participated in the following OU student development program

Williams Student Leadership Retreat
Presented: "Leadership vs. Management" (2009)
"Effective Meetings" (2011)
"Leadership of a Small Group" (Spring 2012)
"Leadership Examples and Mentors" (Fall 2012)
"Strategic vs. Tactical Planning" (Fall 2013)

Participated in the following industry development program
"Steel Design in the Metal Building Industry" (Su 04, Sp 05, Sp 06)
Star Building Systems, Oklahoma City, Oklahoma
Each of these events is a 60 hour lecture series

Additional Creative Activities

2013 — ASCE/SEI Moore, Oklahoma Tornado Assessment Team. Assessment of the schools, hospital and commercial buildings damaged by the May 20th EF-5 Tornado
Team members included: Bill Coulbourne, David Prevatt, Eric Stafford, John Joyce, and Dean Shafer

2008 – 2012 — *Lead* Structural Engineer for the **SkyDance Bridge**
$6.4 million dollar Iconic pedestrian bridge to cross I-40 and connect the Oklahoma City "Core to Shore" project
Collaborative Team.Members: Butzer Design Partnership, SXL and MKEC

2010	Extreme Home Makeover National Team.Members: ABC, CTS Commercial Team Members: Ideal Homes, Dolese OU Team.Members: ASCE, AEI and ESSA student Chapters
2009 – 2010	Morgan Park Fishing Pier Renovation Project Rebuilt 270 ft. wood structure Local Sponsor:: City of Norman OU Team.Members: ASCE, and AEI student Chapters
2007 and Ed. 2- 2008	Eric Bescher (UCLA) and Chris Ramseyer (OU), "Calcium Sulfoaluminate Cement and Concretes" Teaching Tutorial PowerPoint sent to 250 plus universities
1998	Renovation and Improvement of the Odd Fellows water wheel, Turner Falls OK

SERVICE

PROFESSIONAL SERVICE

American Concrete Institute, (ACI)

Committee 223, Shrinkage-Compensating Concrete (2008 - present)

Secretary (2013 - present)

Committee S802, Teaching Methods and Educational Materials (2013 - present)

Editor Special Publication – 307 "Shrinkage-Compensating Concrete – Past, Present, and Future" sponsored by Committee 223 (2013 - 2016)

223 Conference Session Organizer:

Ramseyer, C. (2012) "Shrinkage-Compensating Concrete – Past, Present, and Future" Technical Session 1&2, ACI Fall 2012 Convention, October 21-25, 2012

223 Conference Session Moderator:

Ramseyer, C. (2012) "Shrinkage-Compensating Concrete – Past, Present, and Future" Technical Session 1&2, ACI Fall 2012 Convention, October 21-25, 2012

Oklahoma Uniform Building Code Commission

Storm Shelter Committee – Vice Chair (2016 - present)

IRC - Building Technical Review Committee - Chair (2015 - 2016)

IBC - Building Technical Review Committee (2014 – 2015)

IRC - Building Technical Review Committee - Chair (2010 - 2011)

American Iron and Steel Institute, (AISI)

Committee on Specifications (2006 - 2016)

Task Force Group 4 – Base Test and Anchorage (2006 - 2016)

Subcommittee 22 – Compression Members (2005 - 2016)

Subcommittee 24 – Flexural members (2006 - 2016)

Oklahoma Department of Transportation – 2009 Specification

Section 500 Committee (completed the rewriting of this section) (2008-2010)

Structural Stability Research Council, (SSRC)

Task Group 1 – Axial Columns (2007 - 2010)

Task Group 4 – Frames (2005 - 2010)

Task Group 6 – Research Methods (2005 - 2010)

American Society of Engineering Educators, (ASEE)

Reviewer for the Proceeding of the 2005 Midwest Section Conference

Reviewer for the ERM Division (2007, 2008)

American Institute of Steel Construction, (AISC)

Oklahoma Society of Structural Engineers, (OSEA)

American Society of Civil Engineers, (ASCE)

National Society of Professional Engineers, (NSPE)

UNIVERSITY SERVICE

Director Fears Structural Engineering Lab		(summer 2008 – summer 2017)
Faculty Welfare Committee	Chair (2015-present)	(fall 2013 – spring 2017)
Retirement Plans Management Committee		(fall 2014 – spring 2017)
Faculty Senate Executive Committee		(spring 2014, fall 2015 – spring 2017)
E-Club Advisor		(fall 2009 - spring 2017)
Loyal Knights of Old Trusty Advisor		(spring 2008 – spring 2016)
CoA/CoE Council		(fall 2009 - 2013)
Engineering Practice Facility – COE Task Force		(2007)

DEPARTMENT SERVICE

CEES Undergraduate Curriculum Committee		(2010 – spring 2017)
CEES Scholarship Committee	Chair (2015-present)	(2010 – fall 2017)
CEES Technology and Software Review Committee		(2013 – spring 2017)
Fears Structural Engineering Laboratory Oversight Committee	Chair	(2008 – spring 2017)
ASCE Student Chapter, Faculty Advisor		(2006 – spring 2017)
OU- ASCE Concrete Canoe/Steel Bridge, Faculty Advisor		(2000 - spring 2017)

Year	Canoe	Regional		Nationals		Role
		Ranking	Location	Ranking	Location	
2000	SS Minnow	4th	UMR			co-Advisor
2001	Bringing the Heat	2nd	UA	14th	San Diego, CA	co-Advisor
2002	Jaws	2nd	OU	8th	Madison, WI	co-Advisor
2003	Sooner or Later	1st	KSU	5th	Philadelphia, PA	co-Advisor
2004	Proplous	1st	UNL	17th	Washington D.C.	co-Advisor
2005	Smoke on the Water	2nd	SIUE			Advisor
2006	Sword in the Stone	1st	UMC	16th	Stillwater, OK	Advisor
2007	Centennial	1st	KU	7th	Seattle, WA	Advisor
2008	The Eliminator	1st	UA		Montreal, Canada	Advisor
2009	Sixty Six	2nd	SIUC			Advisor
2010	100 Year Storm	2nd	OU			Advisor
2011	Wild Mary Sudik	1st	KSU	12th	Evansville, IN	Advisor
2012	Legend of the Thunderbird	4th	UNL			Advisor
2013	Unearthed	1st	SIUE	14th	Urbana, Ill	Advisor
2014	Pops	2nd	OSU			Advisor
2015	USS Oklahoma	3rd	KU			Advisor
2016	Boldly Go	2nd	MST			Advisor
2017	Eco Canoe	2nd	UA			Advisor

SAME Student Chapter, Faculty Advisor (2011 – 2015)

AEI Student Chapter, Faculty Advisor (2011 – 2013)

ASCE Mid-Continent Regional Conference, Overall Coordinator (2009-2010)

ASCE Mid-Continent Regional Conference, Competition Coordinator (2001-2002)

Fears Structural Engineering Lab Expansion Organizer

- Phase I, 4,320 sq ft High Bay Expansion (2006, 2007)
- Phase II, 1,800 sq ft Concrete Shrinkage and Curling Lab (2008)
- Phase III, 2+ Acre exterior storage and testing (2011 & 2012)

Fears Lab Expansion - Dedication Celebration Organizer (2007)

CEES Structural Faculty Search Committee, Member (6 times from 2001 to 2006, 2012 & 2013)

CEES Director Search Committee, Member (2000, 2012)

Fears Lab 25th Anniversary Celebration Organizer (2005)

OU – CEES Visiting Council, Member (5 years from 1999 to 2003)

ASCE Student Chapter, Practitioner Advisor (2001-2003)

DEPOSITIONS and COURT CASES IN THE LAST FOUR YEARS

Minyen vs. Southern Underwriters Insurance Co.

Tabor Leblanc vs. Travelers

Cherlyn Hawke vs. State Farm & Ed Dater

Daily vs. USAA

Bercerra vs. Foremost

Cannon vs. Obelisk

Landworks Unlimited vs. LeRoy's Ready Mix Concrete, Inc

B. Appendix

Figure 1 – Front (North face) of 514 W. 54th st, Sand Springs, OK

Figure 2 – From the NE, looking to SW

Figure 3– Back of house

Figure 4 – Loose shingles on North slope of roof seen in Figure 1

Figure 5 – Close up of nail from Figure 4 illustrating shingle pull over.

Figure 6 – Close up of glue strip. Note dirt line outsde the sealed area points to the fact that the seal failure is recent

Figure 7 – close up of glue strip

Figure 8 – Shingle damage

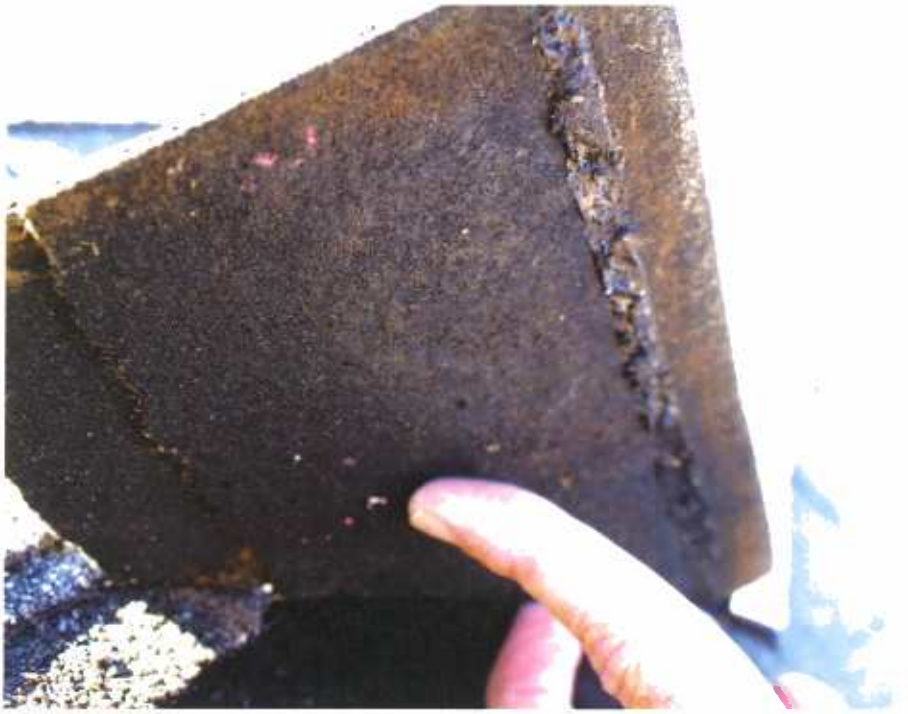

Figure 9 – Portions of lower shingle adhering to the bottom of the top shingle

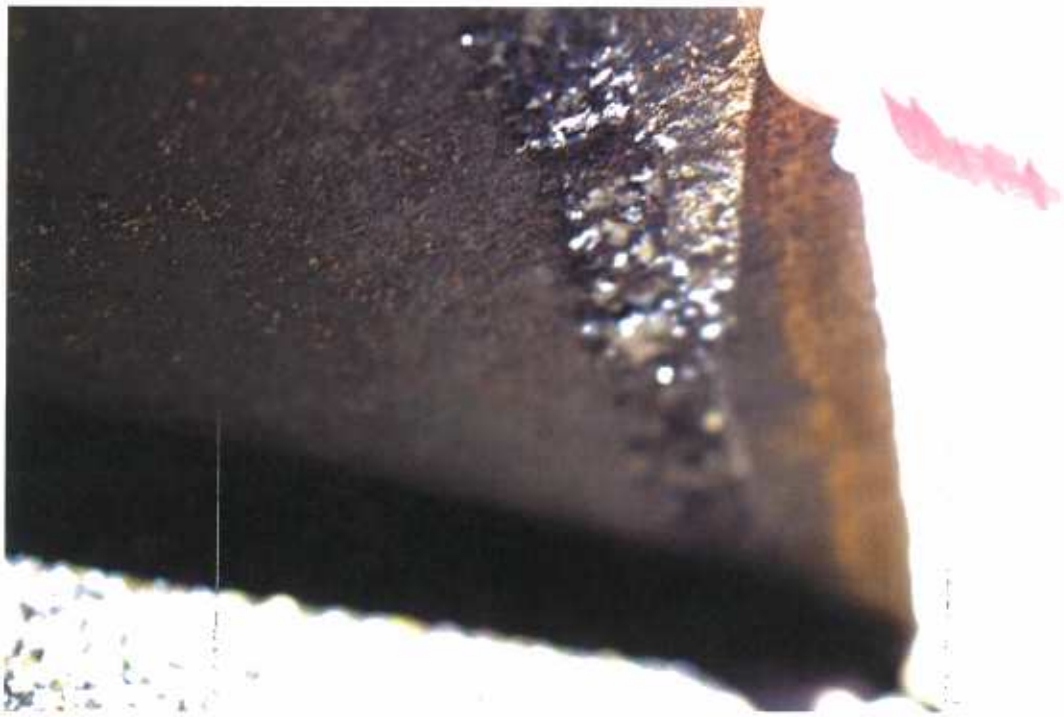

Figure 10 – Portions of lower shingle adhering to the bottom of the top shingle

Figure 11 – Damaged roof ridge shingle.

Figure 12 – Damaged shingle of west facing roof slope

Figure 13 – Damaged shingle of west facing roof slope

Figure 14 – Damaged shingle

Figure 15 – View to the SW

Figure 16 – Roof nails as seen from the attic.

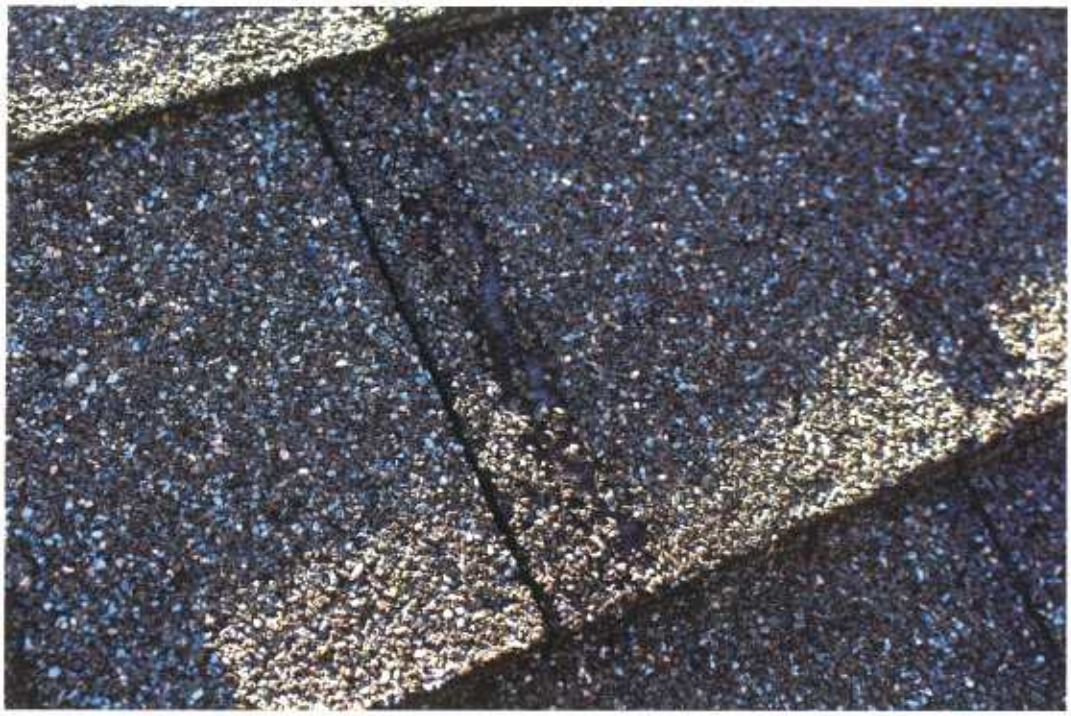

Figure 17 – Damaged Shingle

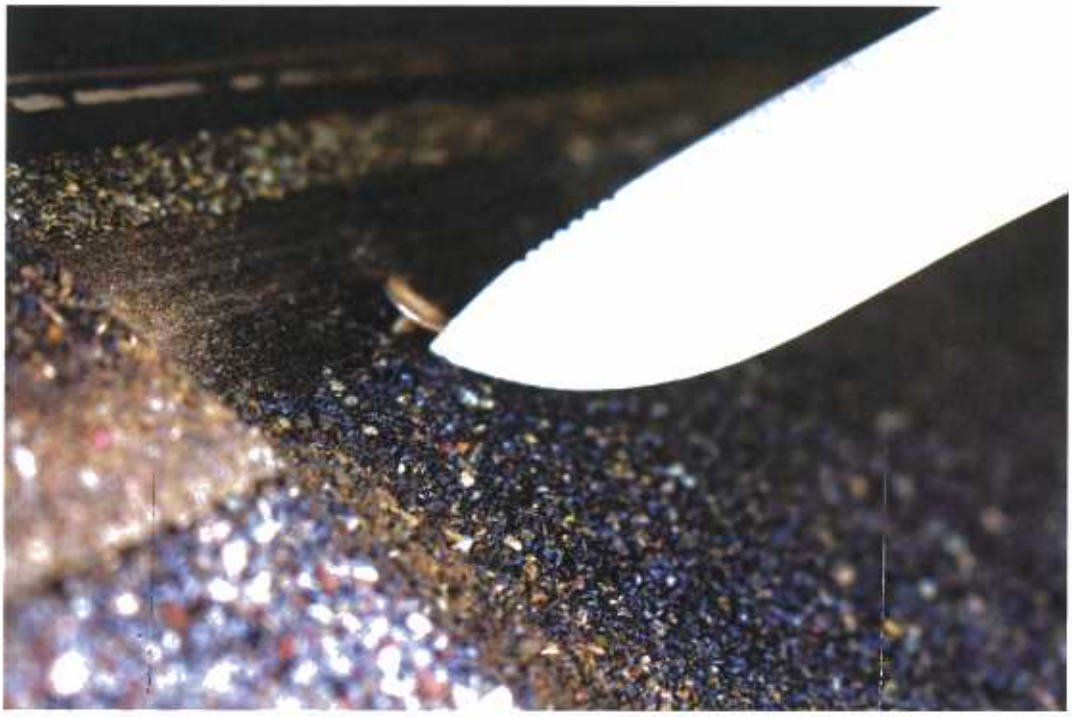

Figure 18 – Close up of nail illustrating shingle pull over.

Figure 19 – Relationship of glue strip to nail - shingle pull through

Figure 20 – Relationship of glue strip to nail - shingle pull through with lower shingle damage at glue strip